GOVERNMENT OF INDIA
MINISTRY OF EDUCATION
DEPARTMENT OF HIGHER EDUCATION
RAJYA SABHA
UNSTARRED QUESTION NO-2267
ANSWERED ON-09/08/2023

FEMALE STUDENTS ENROLMENT IN STEM COURSES IN UNIVERSITIES

2267 Shri Parimal Nathwani:

Will the Minister of Education be pleased to state:

(a) the number of female students who have enrolled in STEM (Science, Technology, Engineering, Mathematics) courses in Universities for the last five years, State-wise breakup, especially for Andhra Pradesh and Gujarat; and

(b) the steps taken by Government to promote STEM courses in the last five years?

ANSWER

MINISTER OF STATE IN THE MINISTRY OF EDUCATION

(DR. SUBHAS SARKAR)

(a) The State-wise number of girls enrolled in Science, Technology, Engineering and Mathematics (STEM) courses in Higher Education Institutions (HEIs), from 2016-17 to 2020-21, as per All India Survey on Higher Education (AISHE), is available at https://www.education.gov.in/parl_ques . The number of female students enrolled in STEM courses has increased to 43.87 lakh in 2020-21from 41.97 lakh in 2016-17.

(b) Ministry of Education is taking various steps to promote STEM courses, which inter-alia include :-

- Under the Study Webs of Active-Learning for Young Aspiring Minds **(**SWAYAM**)** Massive Open Online Courses **(**MOOCs**)** platform, more than 1700 courses in the STEM domain have been developed. Various technical courses as well multi-disciplinary/inter-disciplinary courses in the emerging areas such as Machine Learning, Artificial Intelligence, Data Science etc. are also being developed.

- Under the Virtual Labs project, more than 1000 web-enabled experiments have been developed in the STEM areas for interactive learning.

- In Indian Institutes of Technology (IITs) and National Institutes of Technology (NITs), supernumerary seats have been created to enhance participation of women in these Institutes and thereby in STEM. The enrolment of female students in B.Tech programmes, in IITs has increased from 8% in the year 2016 to 20% in the year 2021, and in NITs has increased from 14% in 2017-18 to 22.12% in 2022-23.

- University Grants Commission (UGC) is providing financial assistance to NET - JRF(National Eligibility Test -Junior Research Fellowship) qualified candidates to undertake advanced studies and research leading to Ph. D. Degree in Sciences, Humanities and Social Sciences. Non-NET Fellowship is available to all full time researchers registered for Ph.D degree in Central Universities who are not in receipt of any other fellowship from any other source.

- Besides, UGC is providing Savitribai Jyotirao Phule Fellowship for Single Girl Child to encourage single girl child pursuing Ph.D. in any stream/subject.

- All India Council for Technical Education (AICTE) is providing various scholarships for technical education, such as Pragati Scholarship Scheme for meritorious girl students, Saksham Scholarship Scheme for differently-abled students, PG Scholarship Scheme for ME, MTech students and Swanath Scholarship Scheme for students of orphans, wards of parents died due to Covid-19, wards of Armed Forces and Central Paramilitary Forces martyred in action etc.

- AICTE is implementing IDEA (Idea Development, Evaluation & Application) Lab scheme, in the technical institutions to support the new age learning and 21st century skills and encouraging students for application of STEM fundamentals towards enhanced hands-on experience, learning by doing and product visualisation.

In addition, the Department of Science and Technology (DST) through its "Innovation in Science Pursuit for Inspired Research (INSPIRE)" scheme is encouraging meritorious youth to study basic and natural sciences at the college and university level and to pursue research careers in both basic and applied science areas including engineering, medicine, agriculture and veterinary sciences. Besides, DST is providing a number of scholarships and fellowships for women in STEM under the umbrella scheme 'Women in Science and Engineering-KIRAN (WISE-KIRAN)'. Besides other initiatives, DST also provides opportunities to young scientists and technologists under its Scheme for Young Scientists and Technologists (SYST) to take up Science & Technology (S&T) based projects for affordable and sustainable innovations towards societal challenges with lab-to-land approach. The young researchers are encouraged to align themselves with academic institutes, Research and Development (R&D) laboratories or S&T driven Voluntary organizations to address local challenges.

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