GOVERNMENT OF INDIA
MINISTRY OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF SCIENCE AND TECHNOLOGY
LOK SABHA
UNSTARRED QUESTION No.1139
TO BE ANSWERED ON 7/2/2020

Launching of I-STEM

1139. SHRI VINOD KUMAR SONKAR:
SHRI BHOLA SINGH:
DR. JAYANTA KUMAR ROY:
DR. SUKANTA MAJUMDAR:
SHRI RAJA AMARESHWARA NAIK:
SHRIMATI SANGEETA KUMARI SINGH DEO:

Will the Minister of SCIENCE AND TECHNOLOGY विज्ञान और प्रौद्योगिकी मंत्री be pleased to state:

(a) whether the Government has launched "Indian Science Technology and Engineering facilities Map (I-STEM)", if so, the details thereof;

(b) whether the "One nation one research" web portal would provide link between researchers and resources to the scientists, if so, the reasons therefor;

(c) whether Annual Session of Indian Science Congress had recently been held at Bengaluru, if so, the details of deliberations and outcome thereof;

(d) whether participation of women in Science, Technology, Engineering and Mathematics (STEM) subjects is less;

(e) if so, the details thereof and remedial measures taken thereon by the Government;

(f) whether expenditure as percentage of GDP on science and technology is low compared to other countries; and

(g) if so, the steps being taken by the Government for development of science and technology in the country?

ANSWER

MINISTER OF HEALTH AND FAMILY WELFARE; MINISTER OF SCIENCE AND TECHNOLOGY; AND MINISTER OF EARTH SCIENCES
(DR. HARSH VARDHAN)
स्वास्थ्य और परिवार कल्याण मंत्री; विज्ञान और प्रौद्योगिकी मंत्री; और पृथ्वी विज्ञान मंत्री
डॉ. हर्ष वर्धन

(a) Yes Sir. The Indian Science Technology and Engineering facilities Map (I-STEM) portal was launched by the Prime Minister of India during the 107th Indian Science Congress in January, 2020. This portal is designed to maintain database of all the major R&D infrastructure and instrument facilities established through public funding in various academic and R&D institutions across the country. This portal has been established and managed by Nanoscience Centre of the Indian Institute of Science, Bengaluru.

(b) The portal has been developed with an objective to link researchers and resources by enabling access and sharing of R&D infrastructure. This will also ensure optimal utilisation of these instruments by students, researchers, scientists and other enterprises. I-STEM, with its database of infrastructure facilities, will facilitate industry-academia collaboration effectively. This will be particularly helpful for small start-up companies with innovative ideas to carry out development and commercialization of new products based on advanced technology. This will also help domestic industry to avoid significant upfront expenditure on R&D to develop products.

(c) The 107th Annual Session of the Indian Science Congress (ISC) was held at University of Agricultural Sciences, Bengaluru during 03rd to 07th January, 2020. As many as 14 Sectional meetings on subjects of Agriculture and Forestry Sciences, Animal, Veterinary and Fishery Sciences, Anthropological and Behavioural Sciences (including Archaeology, Psychology, Education and Military Sciences), Chemical Sciences, Earth System Sciences, Engineering Sciences, Environmental Sciences, Information and Communication Science & Technology (including Computer Sciences), Materials Science, Mathematical Sciences (including Statistics), Medical Sciences (including Physiology), New Biology (including Biochemistry, Biophysics & Molecular Biology and Biotechnology), Physical Sciences and Plant Sciences, were held during the Congress. Recommendations of the 14 Sectional meetings of 107th ISC, as an outcome of the Congress, were circulated to 28 Indian Science Congress Association (ISCA) chapters all over the country for sensitizing rural and student communities.

(d) & (e): Yes Sir. The participation of women in Science, Technology, Engineering and Mathematics (STEM) subjects is less. As per data available with DST, as on 1/4/2018, participation of women in Research and Development (R&D) sector was 16.6% of manpower engaged in R&D. In order to increase women participation in STEM research, the Ministry has initiated several women centric programmes under umbrella scheme 'Knowledge Involvement Research Advancement through Nurturing (KIRAN)'. One of the programmes, 'Women Scientist Scheme' provides career opportunities to unemployed women scientists and technologists, especially those who had a break in career. In 2016-17, 'Mobility' component has been introduced under KIRAN to address relocation issue of working Women Scientists. In 2017-18, a new program 'Indo-US Fellowship for Women in STEM to provide opportunities to Indian Women Scientists, Engineers & Technologists to undertake International collaborative research in premier institutions in USA for duration of 3-6 months, has been started. Further, women scientists & technologists are also encouraged to avail capacity building programs related with research & development, entrepreneurship, managerial skills and leadership under 'National Program for Training of Women Scientists & Technologists working in Government Sector' of DST. Additionally, support is also provided through 'Consolidation of University Research through Innovation and Excellence in Women Universities (CURIE)' Programme to improve the R&D infrastructure in order to enhance women's participation in S&T domain. During 2019-20, DST has started Phase-I of new scheme "Vigyan Jyoti" for girl students of Class 9 to 12 in order to increase the number of women in STEM education. This will further improve the participation of women in scientific research and development.

(f) As per latest available statistics, India spends 0.7% of its GDP on Research & Development as compared to China (2.1%), Korea (4.6%), Japan (3.2%), Germany (3.0%), USA (2.8%), France (2.2%), UK (1.7%), South Africa (0.8%), etc.

(g) Government has been constantly engaged in promotion and growth of scientific research in the country through various measures such as successive increase in plan allocation for scientific departments, setting up of new institutions for science education and research, creation of Centres of Excellence and Facilities in emerging and frontline areas of S&T in academic and national institutions, supporting Mega Facilities for basic research, launching of new fellowships, substantial grant to potential scientists through extramural research funding, scaled up funding in new areas such as Clean Energy and Water including Energy Efficiency, Clean Coal Technology, Smart Grids, Methanol, Desalination, Genome Engineering Technology, National Supercomputing Mission (NSM), National Mission on Interdisciplinary Cyber Physical System (ICPS), promotion of innovation, entrepreneurship and start-up grant for young scientists, Funds for Improvement of S&T Infrastructure (FIST), encouraging public-private partnerships, fiscal incentives and support measures for enhancing participation of industry in R&D etc.

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