Higher education institutions in the country in STEM

The National Education Policy (NEP) 2020 aims to transform and improve the quality of education in the country and to provide a standard of education that is inclusive, equitable, and of high quality, empowering learners for the future and contributing to national development. NEP 2020 also promotes research and innovations by Higher Educations Institutes (HEIs) by setting up start-up incubation centres; technology development centres; centres in frontier areas of research; greater industry-academic linkages; and interdisciplinary research including humanities and social sciences research.

In alignment with NEP 2020, the Ministry of Education has taken several initiatives to enhance quality of education in HEIs.

Government of India also provides financial support to State Governments under Rashtriya Uchchatar Shiksha Abhiyan (RUSA)/ Pradhan Mantri Uchchatar Shiksha Abhiyan (PMUSHA) scheme under three components namely, "Enhancing Quality and Excellence in select State Universities", "Infrastructure Grants to Universities" and "Multi-Disciplinary Education and Research Universities (MERU)" for improvement in Higher Education.

All India Council for Technical Education (AICTE), a statutory body under the Ministry of Education, grants approval for conducting courses in Technical Education at diploma, undergraduate and post graduate levels to Technical Institutions, Institutions deemed to be Universities and standalone institutions. To enhance quality of technical education, AICTE has taken several steps including:

• Model Curriculum has been developed in areas such as Artificial Intelligence, Data Science, Space Technology, Electronic Engineering (VLSI Design and Technology), Robotics and Artificial Intelligence etc. Due representation of Industry stakeholders is ensured in the curriculum revision committees.

• Memoranda of Understanding (MoU) with leading industries and organisations have been signed to facilitate internship, skilling and upskilling of students and faculty members.

• Issued model internship guidelines for technical courses. Internship is mandatory component of Model Curriculum issued by AICTE for different courses. These guidelines provide internship in full-time or part-time.

• Industry Academia Mobility framework launched by AICTE to facilitate connect between theoretical knowledge and practical application, facilitating collaboration between academia and industry. Additionally, it provides for frameworks for industry-academia partnership, encouraging mutually beneficial engagements that enrich both parties.

(b) to (d) Government has taken various measures to promote accessibility and affordability of Higher Education in the country.

Ministry of Education launched SWAYAM (Study Webs of Active-Learning for Young Aspiring Minds) Portal in July 2017 to make high-quality content available to learners free of cost with the approach of "Anyone, Anywhere, Anytime Learning". The portal has more than 5.1 crore enrolments since its inception.

Ministry of Education has launched PM Vidyalaxmi, a new central sector scheme on 6th November 2024, to ensure that no student is denied the opportunity to pursue higher education due to financial constraints. Under the scheme, collateral-free and guarantor-free education loan is provided to all the students, including female students, who get merit-based admission in top Quality Higher Education Institutions (QHEIs) and who desire to avail the education loan. Further, for students with annual family income up to ₹ 8 lakh, the scheme provides 3% interest subvention on loans up to ₹ 10 lakhs. Up to one lakh fresh students not getting any other

scholarship or interest subvention on education loan will get this interest subvention.

University Grants Commission (UGC) provides scholarship under "National Scholarship for Post Graduate Studies (NSPG)" scheme to students pursuing Post Graduate Programs. UGC is also providing fellowships to pursue Ph.D. in all disciplines including STEM education, under UGC NET-Junior Research Fellowship and Savitribai Jyoti Rao Phule Single Girl Child Fellowship.

With a view to improve female enrolment in the Undergraduate Programmes in Indian Institutes of Technology (IITs) and National Institutes of Technology (NITs), supernumerary seats were created which increased the female enrolment from less than 10% to more than 20%.

Further, Indian Institutes of Technology (IITs) and National Institutes of Technology (NITs) also provide 100% tuition fee waiver for SC/ST/PwD undergraduate students. Besides, the most economically backward students (whose family income is less than Rs.1.00 lakh per annum) gets full remission of the fee and the other economically backward students with family income between Rs.1.00 lakh to Rs.5.00 lakh get 2/3rd fee remission.

The National Credit Framework (NCrF) has been developed as a comprehensive credit accumulation & transfer framework encompassing elementary, school, higher, and vocational education & training. NCrF integrates creditization of learning in various dimensions i.e. academics, vocational skills and experiential learning including relevant experience and proficiency/ professional levels acquired. The NCrF provides for creditization of all learning and assignment, accumulation, storage, transfer & redemption of credits, subject to assessment; removes distinction and establishes academic equivalence between vocational & general education while enabling mobility within & between them.

The University Grants Commission (UGC) has formulated guidelines for introduction of Apprenticeship Embedded Degree Programmes by HEIs to provide practical exposure during the course of study with the aim to enhance competencies of the graduates.

With an aim to augment employability of students/learners, the Ministry of Education provides apprenticeship through "National Apprenticeship Training Scheme (NATS)", which is a flagship scheme of Government of India, for on-the-job training and skilling of Indian youth. It is implemented by the Ministry of Education through four regional Boards of Apprenticeship Training/Practical Training (BoATs/BoPT) located at Mumbai, Kanpur, Chennai and Kolkata. Under the Scheme apprenticeship and training is provided to fresh graduates, diploma holders and degree apprentices. The prescribed minimum stipend for Graduate/Degree apprentices is Rs 9,000 per month and for Technician/Diploma apprentices is Rs 8,000 per month. Government of India provides 50% of the prescribed minimum stipend for apprentices. The Ministry of Education launched NATS 2.0 portal to bring students, industry and HEIs on single platform. Through NATS 2.0 portal, the government has started disbursing its share of the stipend through Direct Benefit Transfer (DBT) mechanism. During the last 5 financial years over 8.72 Lakh apprentices were benefitted under NATS through a total financial assistance of Rs 1298 crore for stipend. During 2024-25 the scheme has benefitted 4.82 lakh students till date through financial assistance of over Rs 729 crore.

To promote research ecosystem in the country, in pursuance to the Budget Announcement 2018-19, the Government had approved Prime Minister's Research Fellowship Scheme (PMRF) with total financial outlay of Rs. 1650.00 Cr. The scheme aimed to attract the best and brightest minds to pursue high – quality research in India's premier academic institutions with enhanced financial support. Under first phase of PMRF, 3688 scholars are admitted. The first phase of PMRF has led to better outcomes of research and thus, 10,000 fellowships have been announced under PMRF in Budget 2025-26 for technological research with enhanced financial support.

The Government has approved establishment of three Centres of Excellence (CoE) in Artificial Intelligence (AI); one each in the areas of health, sustainable cities and agriculture; with a total financial outlay of Rs. 990.00 Cr over the period of FY 2023-24 to FY 2027-28.

42 Centrally Funded Institutions including 8 Central Universities, 7 IITs and 8 IIMs were added in last ten years from 2014 to 2024.

The information was given by the Minister of State for Education, Dr. Sukanta Majumdar in a written reply in

the Rajya Sabha today.

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