GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT AND ENTREPRENEURSHIP
RAJYA SABHA
UNSTARRED QUESTION NO. 1236
ANSWERED ON 30.07.2025

IMPARTING FUTURE SKILLS LIKE AI AND ROBOTICS TO YOUNG WORKFORCE

1236 SHRI KARTIKEYA SHARMA:

Will the Minister of SKILL DEVELOPMENT AND ENTREPRENEURSHIP be pleased to state:

(a) whether the Ministry has taken steps to impart future skills like AI, Robotics, Additive Manufacturing to the young workforce, if so, details of initiatives and human resources trained in these areas during the last three years;

(b) whether the Ministry is aware of the demand for skilled youth in ageing countries like the UK, Japan, and Canada to facilitate deployment of skilled labour, boosting India's foreign reserves; and

(c) whether there are proposals to strengthen ITIs and introduce courses in Semiconductors, Solar Energy, Drones and Automation, if so, details thereof

ANSWER

THE MINISTER OF STATE (INDEPENDENT CHARGE) IN THE MINISTRY OF SKILL DEVELOPMENT AND ENTREPRENEURSHIP

(SHRI JAYANT CHAUDHARY)

(a): Under the Government of India's Skill India Mission (SIM) , the Ministry of Skill Development and Entrepreneurship (MSDE) delivers skill, re-skill and up-skill training through an extensive network of skill development centres under various schemes, viz. Pradhan Mantri Kaushal Vikas Yojana (PMKVY), Jan Shikshan Sansthan (JSS), National Apprenticeship Promotion Scheme (NAPS) and Craftsman Training Scheme (CTS) through Industrial Training Institutes (ITIs), to all the sections of the society across the country. The SIM aims at enabling youth of India to get future ready and equipped with industry relevant skills.

To promote new age future skills including digital skills, artificial intelligence/machine learning, MSDE has undertaken the following initiatives:

(i) Under PMKVY 4.0, the dedicated job roles under "Future Skills" category has been introduced with an aim of preparing youth for opportunities in new and emerging technologies including Artificial Intelligence, Machine Learning, and Digital Marketing. During the last three years, a total of 4,09,905 candidates have been trained under 98 different job roles.
(ii) Apprenticeship training is imparted under 266 designated trade and over 750 Optional trades including Artificial Intelligence (AI) and Robotics. Under AI and Robotics related trades, a total of 4,207 apprentices have been engaged in eight trades across the country during the last three years under NAPS.
(iii) Directorate General of Training (DGT) under the aegis of MSDE has introduced 31 new age/future skills courses under CTS in Industrial Training Institutes (ITIs) and National Skill Training Institutes (NSTIs) to provide digital training in emerging areas such as Artificial Intelligence, Mechatronics, Internet of Things, Cybersecurity, Semiconductor, etc. The total enrollment in 31 new age courses under CTS in ITIs during the last three years is 59,327.
(iv) With a view to adopt the best practices in the digital skill training, DGT has signed Memoranda of Understanding (MoUs) with leading IT tech companies like IBM, CISCO, Amazon Web Services (AWS), and Microsoft. These partnerships facilitate the provision of technical and professional skills training in modern technologies, including Artificial Intelligence (AI), Big Data Analytics (BDA), Block chain, Cloud Computing, etc.

(v) Directorate General of Training (DGT) under MSDE has introduced one course 'Artificial Intelligence Programming Assistant (AIPA)' to impart AI-based skill training through Industrial Training Institutes (ITIs) and National Skill Training Institutes (NSTIs). Also, a micro-credential course "Introduction to Artificial Intelligence (AI)" of 7.5-hour has been developed for all CTS trainees in Industrial Training Institutes (ITIs), in collaboration with industry and academic experts.

(vi) MSDE has launched the Skill India Digital Hub (SIDH), a unified digital platform aimed at enhancing skill development in youths across the country by providing access to industry-relevant courses, job opportunities, and entrepreneurship support. It offers a diverse selection of AI and Machine Learning (ML) courses—ranging from introductory programs like *Fundamentals of Azure AI Speech* and *Machine Learning* to advanced modules such as *Google Cloud Generative AI* and *AI Strategy to Create Business Value in Healthcare*—designed to support learners at all proficiency levels and prepare them to thrive in the fast-changing technology landscape.

(vii) National Skill Development Corporation (NSDC) under the aegis of MSDE has partnered with a number of international organizations such as AWS, Microsoft, Intel, Redhat, Pearson VUE, Boston Consulting Group (BCG), Cisco Networking Academy for providing digital courses.

(b): MSDE has signed MoUs or Memoranda of Cooperation (MoCs) with eight countries—Australia, Denmark, Japan, Germany, Qatar, Singapore, the UAE, and France—to foster collaboration in skill development and Vocational Education and Training (VET). Aimed at expanding opportunities for the Indian workforce both within the country and abroad, these agreements enable technical exchanges, joint training initiatives, mutual recognition of qualifications, and the sharing of best practices. Further, with the efforts of MSDE, the New Delhi Leaders' Declaration at the G20 summit included a commitment to develop an international reference classification of occupations based on skills and qualification requirements. This initiative aims to enhance cross-country comparability and mutual recognition of skills. The International Labour Organization (ILO) will lead the study.

MSDE has also set up Skill India International Centres (SIICs), envisioned as key hubs to support individuals pursuing overseas employment opportunities. These centres aim to create a 'Trusted Workforce Supply Chain' that ensures skilled mobility from India is fair, transparent, and reliable. It is the constant endeavor of MSDE to engage with different countries and facilitate gainful employment opportunities to the youth of the country.

To identify focus countries for enhancing overseas employment opportunities and skilled labor mobility, MSDE has also conducted a study covering 16 countries, including the UK, Japan, and Canada. In addition, demand assessment is also informed through Government-to-Government (G2G) agreements signed by MSDE, inputs received from Indian Missions abroad, and engagements undertaken by State Governments with foreign counterparts on matters related to international labor mobility.

(c): The Ministry has launched several initiatives to modernize ITIs and training centres, focusing on futuristic domains and emerging sectors such as Semiconductors, Solar Energy, Drones, Electric Vehicles, and Automation. Special Projects and Short-Term Training programs are aligned with the SIDH platform to enable modular learning. In collaboration with MeitY, MNRE, and other ministries, efforts are underway to introduce industry-relevant curricula and upgrade training infrastructure in line with Industry 4.0. Additionally, Production Linked Incentive (PLI) schemes have been rolled out for 14 key sectors—including solar PV modules, ACC batteries, and drones—to boost manufacturing, exports, and drive economic growth, supporting India's vision of becoming 'Aatmanirbhar'.

Also, the Cabinet has approved the National Scheme for Upgradation of Industrial Training Institutes (ITIs) and the establishment of National Centres of Excellence (NCOEs) for skill development. The scheme aims to upgrade 1,000 ITIs through a hub-and-spoke model, emphasizing outcome-based training in partnership with state governments and industry. It includes the introduction of industry-aligned curricula and new courses in emerging fields such as Artificial Intelligence, robotics, and climate-friendly technologies.

*****