### Ministry of External Affairs (New, Emerging and Strategic Technologies Division)

Subject – Frequently Asked Questions on New, Emerging and Strategic Technologies and Parliamentary Questions answered by NEST Division for the NEST weblink.

#### General

### Q1. What is Tech Diplomacy?

A. Tech Diplomacy refers to the use of diplomatic efforts and international cooperation to shape the development, governance, and deployment of emerging technologies. It involves governments, multinational organizations, private sector players, and academia working together to address the geopolitical, economic, ethical implications of technology and use of technology for achieving country specific priorities and sustainable development goals.

#### Q2. How does the NEST Division engage in technology diplomacy?

A. NEST Division of the Ministry of External Affairs was set up in 2020 primarily to enhance India's technology diplomacy. In this process, the Division has actively engaged to evolve and coordinate Indian Positions for negotiations regarding technology governance rules, standards and architecture in the multilateral or plurilateral context, including at the UN and relevant international organizations. The Division has also played an instrumental role in building policy interfaces with key partner countries and international organizations and in strengthening the role of Missions as the 'field synapses' in facilitating supply related chains for new and emerging technologies. These engagements have strengthened India's role as a determinant player in determining the national and global perspectives on new emerging and strategic technologies. More details about NEST's engagements can also be found in MEA's Annual Reports.

# Q3. What role does the Ministry of External Affairs (MEA) play in shaping India's global tech policy?

A. The MEA coordinates international engagements, negotiates technology partnerships, ensures India's strategic interests in multilateral tech governance, and promotes India's leadership in critical and emerging technologies.

#### **National**

Q4. How does India contribute to global discussions on technology governance?

**A.** India actively participates in international forums such as the G20, UN agencies, QUAD, BRICS, and other multilateral platforms to shape global norms on AI, cybersecurity, data governance, semiconductors, climate technologies, digital public infrastructure among other technologies.

### Q5. How has India been engaging in Technology Diplomacy to realise the vision of Viksit Bharat 2047?

A. India is leveraging Technology Diplomacy as a strategic tool to realize the vision of Viksit Bharat (Developed India) by 2047. We have fostered technology partnerships and put in place frameworks focussing on shaping global tech policies, creating standards, developing resilient supply chains, and co-developing technologies like the Quad, EU - India Trade and Technology Council, I2U2 (India, Israel, UAE, U.S.), iCET with USA (Initiative on Critical and Emerging Technology), UK- India Technology and Security Initiative, India-Germany Innovation and Technology Partnership Roadmap among others. India and Australia have also signed the Framework Arrangement on Cyber and Cyber-Enabled Critical Technology Cooperation, India and Japan have entered into a Memorandum of Cooperation on semiconductor supply chain partnership, India and Israel have signed a MoU on Industrial Research and Development Cooperation, focusing on key technology areas. India and Singapore have agreed to explore cooperation in critical and emerging technologies, and in February 2024, the UAE and India signed an MoU on digital infrastructure projects. We are also engaged in technology dialogues with several key partners, to supplement our own efforts and enhance outcomes. In addition, India has also spearheaded digital development initiatives in Africa, demonstrating that technology can be a tool for equitable development and shared growth.

# Q6. What national efforts are being made by India to position itself as a key player in the realm of emerging and critical technologies globally?

A. Govt. of India is committed to driving advancements in new, emerging and strategic technologies and has taken several initiatives such as the IndiaAI Mission, BioE3 Policy, Green Hydrogen Mission, Quantum Mission, Semicon India Program among other initiatives including as part of Make in India, Skill India and Digital India. The 'IndiaAI Mission' aims to harness artificial intelligence for democratizing innovation and addressing societal challenges; the 'Green Hydrogen Mission' aspires to make India a global hub for green hydrogen production and exports, ensuring decarbonization and energy security; the 'National Quantum Mission' focuses on advancing quantum technologies in computing, communication, and sensing including by setting up Thematic Hubs; and the 'Semicon India Program' promotes the development of a robust semiconductor ecosystem to support chip manufacturing and innovation.

# Q7. What initiatives are being taken by the Government of India to safeguard against the potential disruptions by New, Emerging and Strategic technologies in the context of Future of Work?

A. In light of our Prime Minister's vision is to make India the global skill capital and the world's leading exporter of talent, the government of India has launched initiatives like Make in India, Skill India, Digital India, Startup India, and National Skill Development Mission. The government has also invested in international partnerships for education, research, and skills development in science and technology. The Union Budget 2025-26 aims to promote continuous skilling, sustainability, and employability through centrally sponsored schemes and building Centres of Excellence including for AI for education.

# Q8. How is India addressing the risks/vulnerabilities in the global technology supply chains including for critical minerals?

A. The Government of India is focusing on domestic manufacturing through initiatives like the "Make in India" program and the Production Linked Incentive scheme. International collaborations via EU-India Trade and Technology Council and the International Partnership for Economic Cooperation (IPEF) aims to strengthen economic engagement and promote growth. The Minerals Security Partnership (MSP) aims to accelerate the development of sustainable critical energy minerals supply chains, and partnerships with countries like the U.S., Japan, and Australia are also in place to address risks in global technology supply chains.

### Q9. How does India balance innovation with security in critical and emerging technologies?

A. India follows a risk-based approach, ensuring regulatory oversight for sensitive technologies while fostering innovation through sandboxes, R&D incentives, and international best practices.

### Q10: What is India's long-term vision for emerging technologies?

**A.** India aims to be a global hub for innovation, talent, and responsible technology leadership while ensuring inclusive growth through digital transformation and strategic international partnerships.

### Q11: How can foreign governments, businesses, and researchers collaborate with India on strategic technologies?

**A.** MEA facilitates government-to-government (G2G) engagements, industry partnerships, and academic collaborations through structured dialogues, bilateral agreements, and joint research programs.

### International/Global

### Q12:What has been India's role in Global Partnership on Artificial Intelligence (GPAI)?

A. GPAI an international and multi-stakeholder initiative to guide the responsible development and use of AI. India is a founding member and lead chair of GPAI for 2024. As lead chair, India has worked towards making GPAI the nodal partnership for global cooperation on AI. In 2023, India hosted the GPAI Summit in New Delhi. The GPAI New Delhi Declaration built the consensus among GPAI members on advancing safe, secure, and trustworthy AI and commitment to supporting the sustainability of GPAI projects. It acknowledges the need to harness new opportunities and mitigate the risks arising from the development, deployment, and use of Artificial Intelligence (AI).

# Q13: Which international organizations is India actively engaged with on technology issues?

#### A. India collaborates with:

- G20, QUAD, and BRICS for technology and digital economy discussions.
- UN agencies on AI ethics, cybersecurity, and space technology.
- WTO and OECD on digital trade and tech regulations.

### Q14: What are India's multilateral engagements on emerging technologies?

A. India has actively engaged in multilateral forums to shape global technology governance, foster innovation, and promote just and inclusive growth. As a key voice in the G20, QUAD, BRICS, and the UN, India has called for a fair and secure digital economy, emphasizing data sovereignty, responsible AI, and equitable access to emerging technologies. Under its G20 presidency, India introduced the Digital Public Infrastructure (DPI) framework. Through QUAD's Critical and Emerging Technology Initiative, India is collaborating with the U.S., Japan, and Australia semiconductors, AI, cybersecurity, and telecom infrastructure. In BRICS and the Global South, India champions South-South cooperation, helping developing nations build digital economies by sharing expertise in fintech, AI, and space technology. India has also actively participated in international bodies such as the ITU,WTO and OECD discussions to shape global standards on cybersecurity, AI, quantum computing, and next-generation telecom technologies. Through these engagements, India is balancing strategic partnerships with advanced economies while fostering technology access and capacity-building for developing nations, in order to bridge science, technology and innovation divides within and between countries.

### 2020

Answers to the Lok Sabha Unstarred Question No. 552 on New, Emerging and Strategic Technologies Division

2023

Answers to the Lok Sabha Unstarred Question No. 2169 on Critical and Emerging Technologies

### 2025

Answers to the Rajya Sabha Starred Question No. 102 on India's Position Amongst Global Technological Competitors.

Answers to the Rajya Sabha Unstarred Question No. 1679 on US - India partnership in Technology and Defence.