# A Report on Industrial Visit to "Central Manufacturing Technology Institute (CMTI)" Organized by Department of Computer Science & Engineering (Cyber Security) on 28.04.2026

**Report Submitted by: Mr. Gowtham A, Assistant Professor, Department of CSE(Cyber Security).**
**Total No. of Participants: 42 Students**
**Mode of Conduct: Offline.**
**Report Received on 29.04.2026.**

One-day Industrial Visit to Central Manufacturing Technology Institute (CMTI) was organized for the I Year B.TechCSE(CS) students on 28th April 2026. The Industrial Visit to CMTI started at 08.00 AM and reached CMTI by 01.00 PM. The students along with faculty members visited the CMTI facilities between 02.00 PM to 05.00 PM.

## ABOUT CMTI:

The Central Manufacturing Technology Institute (CMTI) is a society registered with the Government of India, operating as an autonomous institution under the administrative control of the Ministry of Heavy Industries (MHI). The institute has a Governing Council appointed by MHI, which includes representation from various sectors such as the Union Government, machine tool manufacturing and user industries, industrial associations, and manufacturing domain experts. The Governing Council is authorized for policy development and implementation. Additionally, the institute receives assistance from a Research Advisory Board (RAB) and a Technical Committee, which includes representatives from industries and academia, regarding technology advancement.

CMTI is committed to addressing the 4P challenges – Product, Process, People, and Production – through cutting-edge science and technology solutions. The institute introduces emerging machine and manufacturing process technologies that are new to India and at the forefront of global advancements. By pushing the boundaries of what is possible, CMTI pioneers breakthroughs that shape the industry's future.

CMTI develops specialized and customized machines, process technologies, and automation systems in order to cater to the specific needs of customers and industries. By tailoring its solutions to meet the unique requirements of its clientele, CMTI ensures that it remains a trusted partner.

Furthermore, CMTI provides high-value-added technical services to foster the skilling and reskilling of industry and academic personnel, ultimately leading to enhanced capacity building and productivity. By nurturing the talents and capabilities of individuals, CMTI empowers them to push the boundaries of their potential and contribute to the overall advancement of the manufacturing sector.

Embracing a holistic approach, CMTI actively promotes advanced technology intervention, technology licensing, incubation, entrepreneurship, and open inclusive innovation. This commitment to innovation allows the institute to leverage its expertise in machines, processes, and allied areas, propelling the manufacturing sector into a future of limitless possibilities.

**Places Visited in SETS:**

Project Planning and Management Group is a management support group which facilitatingcommercial aspects of projects and value added Laboratory services.PPM groupactivities involves Customer Interaction, negotiations, e-tendering, Invoicing, Liaison with Customer, Liaison with R&D groups, GST related issue, vender registration and receipt of orders & processing. PPM group function like ***"ONE STOP SHOP"*** for all the customer requirements. We believe in customer friendly and flexibleapproach makes us when it comes to **'customer delight'**.

**List of Laboratory Services**:-

- CHEMICAL AND METALLURGY LAB SERVICES
- HYDRAULIC & PNEUMATIC LAB SERVICES
- LASER LAB SERVICES
- METROLOGY LAB ONSITE
- METROLOGY LAB SERVICES
- PROFICIENCY TESTING PROVIDER – CERTIFICATE and SCOPE
- NMTC LAB SERVICES
- NOISE AND VIBRATION LAB SERVICES
- SERVICES AT RAJKOT CENTRE
- SENSOR &VISION TECHNOLOGY LAB SERVICES &STDF FACILITY

CMTI is national R&D institute involved in Design and Development of special purpose machines, ultra-precision machines and Manufacturing process technology, Training and value added laboratory services. Depending on activity the projects are classified as follows.

- **Sponsored projects:** are funded by an external organisation or agency (includes government and private organisation) with specific scope of work or set of specific targets.
- **Plan projects:** are those projects which are funded by our parent department DHI, Government of India. These projects include research and development& facility creations of new technologies.
- **In-house R & D projects:** CMTI undertakes R&D projects which are potential of technology development depending on internal studies to build a capacity building projects.
- **Grant in Aid projects:** are those projects which are funded by DSIR, DST, ARDB etc. These projects include research and development of new technologies, processes.
- **Collaborative Lab Projects:** are those projects which are funded by a CMTI & other external organisation or agencies. These projects include research and development of new technologies, processes.
- **Laboratory Services:** CMTI is starts with single window services called facilitation center for Laboratory services for all the matter related to value added Laboratory services.

## Conclusion:

The industrial visit to CMTI, Bengaluru was highly informative and beneficial for students, as it successfully bridged the gap between theoretical knowledge and real-world industrial practices. Students gained first-hand exposure to advanced manufacturing technologies, precision engineering, and modern testing facilities, which enhanced their technical understanding and practical skills.

The interaction with scientists and engineers provided valuable insights into current research trends, industry expectations, and career opportunities in manufacturing and allied domains. The visit also helped students understand the complete lifecycle of product design, development, testing, and implementation in a professional environment.

Overall, the visit enriched students' learning experience, improved their awareness of industrial standards, and motivated them to pursue innovation and skill development. It played a crucial role in shaping their professional outlook and preparing them to meet future industry challenges effectively.

## Outcomes of Industrial Visit:

- **Exposure to advanced manufacturing technologies**
  Students gain insights into cutting-edge areas like additive manufacturing, precision engineering, metrology, and Industry 4.0 systems used in modern industries.
- **Practical learning and hands-on experience**
  Visits include demonstrations, lab exposure, and interaction with state-of-the-art equipment, helping bridge the gap between theory and real-world applications.
- **Understanding of industrial R&D environment**
  CMTI, being a national R&D institute, exposes students to innovation-driven processes, product development, and real industrial problem-solving approaches.
- **Skill enhancement and industry readiness**
  Programs are designed to create "industry-ready engineers" by improving technical competencies, analytical thinking, and awareness of current industrial practices.
- **Career awareness and networking opportunities**
  Interaction with experts and exposure to live projects helps students understand career paths in manufacturing, research, and technology sectors.