



Don Bosco Institute of Technology

[ENGINEERING COLLEGE]

(An Autonomous Institute Affiliated to University of Mumbai & Approved by AICTE)

Report on Industrial Visit to the Centre for Excellence in Telecom Technology and Management (CETTM), Powai, Mumbai

Date of Visit: 8 September 2026

Venue: Centre for Excellence in Telecom Technology and Management (CETTM), Powai, Mumbai

Reporting Time: 9:00 AM

Visit Commencement Time: 9:30 AM

Organized By: Department of Electronics & Telecommunication Engineering

Participants: 39 BE EXTC Students and 2 Faculty Members

1. Aim

To gain practical knowledge of telecommunication technologies, networking systems, modern communication infrastructure, and their real-world applications through an industrial visit to CETTM, Powai, Mumbai.

2. Objectives

1. To understand the practical applications of telecommunication technologies.
2. To gain exposure to modern networking systems and communication infrastructure.
3. To correlate theoretical concepts learned in the classroom with real-world industrial applications.
4. To understand industrial practices and professional work environments in the telecommunications sector.
5. To create awareness of career opportunities and emerging technologies in the telecom industry.

3. Introduction

An industrial visit provides students with an opportunity to gain practical exposure to industrial practices and understand how theoretical concepts are implemented in real-world applications. As part of the academic activities of the Department of Electronics & Telecommunication Engineering, Don Bosco Institute of Technology, Mumbai, an industrial visit to the Centre for Excellence in Telecom Technology and Management (CETTM), Powai, was organized for BE EXTC students.

The visit aimed to familiarize students with modern telecommunication technologies, networking systems, optical fibre communication, and communication infrastructure. It provided an opportunity to observe technical equipment, understand its applications, and interact with professionals working in the telecommunications domain.



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The visit helped students bridge the gap between theoretical knowledge and practical implementation while developing an understanding of the technologies and professional practices involved in delivering reliable communication services.

4. About CETTM

The Centre for Excellence in Telecom Technology and Management (CETTM), Powai, is associated with technical training and professional development in telecommunications and networking.

The centre provides technical exposure to various aspects of communication systems, networking technologies, and information and communication technology infrastructure. Its training facilities and technical demonstrations help students and professionals understand the practical implementation of telecom technologies.

The visit offered students valuable exposure to telecommunications equipment and infrastructure, enabling them to relate the concepts studied in their Electronics & Telecommunication Engineering curriculum to industrial applications.

5. Visit Details and Activities

5.1 Introductory Technical Session

The visit commenced with an introductory technical session in which students were familiarized with various aspects of telecommunications, networking, and communication infrastructure.

The session highlighted the importance of reliable and high-speed communication systems in modern society. Students gained an understanding of the role of telecommunications infrastructure in supporting data transmission, network connectivity, and communication services.

The technical presentation helped students appreciate the significance of emerging communication technologies and the practical challenges involved in maintaining efficient communication networks.



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Photo 1: Group photograph of students and faculty members at CETTM, Powai.



Photo 2: Technical presentation and introductory session at CETTM.

5.2 Demonstration of Optical Fibre Splicing

One of the important highlights of the visit was the demonstration of optical fibre splicing. Students observed the tools and equipment used to join optical fibres and learned about the importance of precision and proper handling during the splicing process.

The demonstration provided practical insights into the following aspects:

- Basic principles of optical fibre splicing.
- Importance of proper fibre alignment during joining.



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- Role of splicing in establishing optical communication links.
- Significance of minimizing signal loss to ensure efficient transmission.
- Importance of careful fibre handling and the use of appropriate tools.

This activity helped students relate their theoretical knowledge of optical fibre communication to the practical procedures followed during the installation and maintenance of communication networks.



Photo 3: Demonstration of optical fibre splicing and related equipment.

5.3 Visit to the Telecommunication and Networking Equipment Area

Students also visited the area containing telecommunication and networking equipment racks. They observed how different equipment units were arranged and interconnected to form part of a larger communication network.

The technical staff explained the functioning and practical applications of the equipment and addressed students' queries. The interaction helped students understand the importance of systematic equipment arrangement, network interconnections, and infrastructure management.

The visit provided exposure to the physical infrastructure supporting telecommunications and data transmission. Students gained a better understanding of how individual equipment units contribute to the functioning of communication networks.



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Photo 4: Visit to the telecommunication and networking equipment area.

6. Technical Knowledge and Industrial Exposure

The industrial visit provided students with practical exposure to important areas of Electronics & Telecommunication Engineering.

The major technical aspects covered during the visit are summarized below.

Sr. No.	Technical Area	Knowledge and Exposure Gained
1	Telecommunication Systems	Understood the practical importance of communication technologies and telecom infrastructure.
2	Optical Fibre Communication	Observed optical fibre splicing and learned about fibre alignment, joining techniques, and signal loss.
3	Networking Infrastructure	Gained exposure to telecommunication and networking equipment racks and their interconnections.
4	Data Transmission	Understood the importance of reliable transmission infrastructure in communication networks.
5	Industrial Practices	Learned about the importance of technical discipline, safety, equipment handling, and maintenance.
6	Professional Development	Gained awareness of the practical skills and technical knowledge required in the telecommunications industry.



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7. Learning Outcomes

After completing the industrial visit, students were able to:

1. **Understand** the practical applications of telecommunication systems and networking infrastructure.
2. **Explain** the basic process of optical fibre splicing and its importance in optical communication.
3. **Relate** theoretical concepts studied in the Electronics & Telecommunication Engineering curriculum to real-world industrial applications.
4. **Identify** the role of telecommunication and networking equipment in establishing reliable communication networks.
5. **Recognize** the importance of safety, discipline, teamwork, and equipment maintenance in a professional technical environment.
6. **Develop awareness** of the technical skills and career opportunities available in the telecommunications and networking sectors.

8. Relevance to the Electronics & Telecommunication Engineering Curriculum

The industrial visit complemented the academic curriculum by providing practical exposure to topics related to communication systems, optical fibre communication, data transmission, and networking technologies.

The demonstration of optical fibre splicing reinforced students' understanding of optical communication principles, while the visit to the networking equipment area provided insight into the infrastructure required for reliable communication.

The activities enabled students to connect classroom learning with practical applications and appreciate the importance of hands-on technical knowledge in engineering practice.

9. Conclusion

The industrial visit to the Centre for Excellence in Telecom Technology and Management (CETTM), Powai, Mumbai, was an informative and enriching learning experience for the BE EXTC students of Don Bosco Institute of Technology.

The introductory technical session, optical fibre splicing demonstration, and visit to the telecommunication and networking equipment area provided valuable insights into the practical implementation of communication technologies. Students gained a better understanding of optical fibre communication, network infrastructure, data transmission, and the importance of maintaining reliable communication systems.

The visit also highlighted the significance of technical competence, practical exposure, safety, teamwork, and professional discipline in the telecommunications industry.



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Overall, the visit successfully supported the academic learning objectives of the Department of Electronics & Telecommunication Engineering by strengthening the connection between theoretical knowledge and industrial applications. It also encouraged students to explore emerging technologies and career opportunities in telecommunications and networking.

Impact analysis from feedback :

Sr. No.	Feedback Parameter	PO/PSO Mapping	Projected Average Rating (Out of 5)	Impact (%)
1	Understanding of GSM, CDMA, and cellular communication technologies (1G–4G)	PO1, PO2, PSO1, PSO2	4.13	82.56%
2	Correlation of theoretical concepts with real-world telecom applications	PO1, PO2, PO3, PSO1, PSO2	4.08	81.54%
3	Understanding of wireless communication, signal propagation, and network performance	PO1, PO2, PO5, PSO1, PSO2	4.10	82.05%
4	Awareness of network capacity, SIR, and cellular network planning	PO1, PO2, PO3, PO5, PSO1, PSO2	4.08	81.54%
5	Exposure to telecom infrastructure, industrial practices, and professional environments	PO8, PSO1, PSO2	4.10	82.05%
6	Awareness of career opportunities, emerging technologies, and continuous learning	PO1, PO3, PO5, PO10, PSO1, PSO2	4.10	82.05%

Parameter	Result
Total students participating	39
Total feedback responses expected	234
Projected overall average rating	4.10/5
Overall impact percentage	81.97%



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Impact Analysis from MCQ assessment

The MCQ assessment was conducted to assess students' understanding of GSM architecture, cellular communication fundamentals, and optical fibre communication techniques following the industrial visit to CETTM, Powai.

The assessment results indicate that **84% of the recorded responses to Q3 were correct**, reflecting relatively strong understanding of subscriber identification using IMSI. Similarly, Q6 on fusion splicing recorded 76% correct responses, while Q4 on GSM logical control channels recorded 72%.

The results for GSM architecture, TDMA frame structure, fibre types, fibre cleaving, and OTDR testing ranged from 60% to 68%. These results indicate that some students may benefit from further reinforcement of these technical concepts through classroom discussions, demonstrations, and practical exercises.

The zero scores recorded for Q9 and Q10 should not be interpreted as a complete lack of student understanding. The answers and answer key must first be reviewed to determine whether the scoring system correctly recognized valid responses.

Overall, the MCQ assessment provides evidence of students' existing technical knowledge and identifies areas requiring reinforcement. However, without a comparable pre-visit assessment, the results cannot establish how much students' knowledge improved specifically because of the industrial visit.

Learning Outcome and PO/PSO Mapping

Learning Area	Related PO/PSO	Evidence from MCQ Assessment	Identified Action
GSM architecture and TDMA	PO1, PO2, PSO1, PSO2	Q1: 60%; Q2: 68%	Reinforce GSM architecture and TDMA frame structure.
Subscriber identification	PO1, PSO1, PSO2	Q3: 84%; Q9–Q10 require score verification	Reinforce the distinction between device and subscriber identifiers after correcting the answer key.
GSM control channels	PO1, PO2, PSO1, PSO2	Q4: 72%	Revise the functions of GSM logical control channels.
Optical fibre communication	PO1, PSO1, PSO2	Q5: 68%	Explain the characteristics and applications of single-mode and



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Learning Area	Related PO/PSO	Evidence from MCQ Assessment	Identified Action
			multimode fibres.
Fibre splicing and preparation	PO1, PO2, PSO1, PSO2	Q6: 76%; Q7: 60%	Reinforce fibre preparation, cleaving, and fusion splicing.
Fibre fault testing	PO1, PO2, PSO1, PSO2	Q8: 60%	Explain OTDR operation and its role in locating faults in optical fibre links.

The mapping is indicative and should be checked against the institute's approved PO/PSO statements and the actual learning objectives of the visit.

Conclusion

The MCQ-based assessment following the industrial visit to CETTM, Powai, provided an opportunity to assess students' understanding of GSM and optical fibre communication technologies.

Among the first eight questions, the highest correct-response rate was observed for subscriber identification using IMSI (84%), followed by fusion splicing (76%) and GSM logical control channels (72%). Lower correct-response rates were observed for GSM architecture, fibre cleaving, and OTDR testing, indicating areas where additional academic reinforcement may be beneficial.

The assessment therefore helps identify students' strengths and areas for improvement in the technical concepts covered by the questionnaire. Correcting the answer keys for Q9 and Q10 and reviewing the remaining submissions will improve the reliability of the final analysis.

Report Prepared By

Dr. Aparna M. Telgote

Department of Electronics & Telecommunication Engineering

The Bombay Salesian Society's Don Bosco Institute of Technology, Mumbai



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Event Poster



The Bombay Salesian Society's
Don Bosco Institute of Technology, Mumbai
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Department of Electronics and
Telecommunication Engineering

Industrial Visit for BE EXTC

to

CETTM, MTNL Powai

Exploring Telecom Technologies
for a Connected Future



Transmission | Wireless | Broadband/FTTH
& Emerging Technologies





Date
8th September 2026
(Tuesday)



Time
9:30 AM onwards



Venue
CETTM, MTNL, Powai
MTNL CETTM Building, Technology Street,
Hiranandani Gardens, Powai, Mumbai – 400076
Landmark: Near Dr. L. H Hiranandani Hospital.

Learn
Explore
Grow



An opportunity to gain hands-on exposure,
interact with industry experts and experience the real world
of telecommunications!



Student Co-ordinator
Mrunmai Paktekar - 8591877112



Faculty Co-ordinator
Dr. Aparna M. Telgote



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Copy of ATTENDANCE

The Bombay Salesian Society's
DON BOSCO INSTITUTE OF TECHNOLOGY, MUMBAI
(An Autonomous Institute Affiliated to University of Mumbai)
Department of Electronics and Telecommunication Engineering
IV to CETTM MTNL Powai, Mumbai

Class: B.E. SEMSTER VII Course: Mobile Communication system

Faculty Name: Dr. Aparna M. Telgote

Date - 8/9/2020

Attendance :

Roll No.	Student Name	Sign
1	/ Ansari Nabeela Mustak Ahmed Nasreen	
2	Auti Pratham Ganesh Surekha	—
3	Badhe Atharva Sanjay Ashwini	—
4	/ Bait Nirmiti Babu Priyanka	
5	/ Bevanur Prajwala Siddamallappa	
6	Botle Sumit Jagdish Vasudha	
7	Dafedar Ibrahim Masood Ahmed Shaziya	
8	Deshmukh Anant Hemant Vaishali	
9	Dias Myron Vijay Flory	—
10	Dikonda Vinay Prabhakar Yashoda	—
11	Dubey Abhishek Manishkumar Manju	—
12	/ Gajula Priya Venkatesh Sarita	—
13	/ Gaonkar Samiksha Narayan	
14	Garige Sandesh Anjanna Santoshi	
15	/ Gokhale Harshali Narendra	
16	/ Hande Netra Nitin Chhaya	
17	Hiremath Abhiroop Vijay Kavita	—
18	Jadhav Eshan Liladhar Prerana	—
19	/ Jaiswal Yukita Jagdish Mamta	—
20	/ Jamnekar Vishakha Kailas Usha	—
21	Jangam Aayush Shailesh Chaya	
22	Kanse Mangesh Kishor Manisha	—
23	Khan Ayan Rizwan Nazia	—
24	Khan Mohammed Shayan Rizwan	—



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Copy of ATTENDANCE

25	Khan Mohd. Moin Afroz Nazia	—
26	Kurlekar Om Shamlingappa Arati	—
27	/ Mediboina Pritika Krishnarao Rohini	<u>Pritika</u>
28	Mishra Soham Kailash Aruna	<u>Soham</u>
29	Mulla Fahaam Aziz Atika	—
30	Munj Kanishq Ramdatt Medha	—
31	Nellithanath Daniel Joseph Sebastian Devasia M	<u>Daniel</u>
32	Nyalapelli Kartik Yadagiri Aruna	<u>Kartik</u>
33	Pardeshi Parth Bhupendra Shipla	—
34	Parimi Gunavardhan P Thanuja	—
35	Patil Ishant Ishwar Vandana	—
36	Patil Sushant Uttamrao Kantabai	—
37	/ Patlikadan Jancy Ganeshkumar Ambili	—
38	/ Pawar Sneha Suresh Mangal	<u>Sneha</u>
39	Rai Harsh Santosh Neelam	—
40	Raskar Akshay Sanjay Sangeeta	—
41	/ Salunke Sakshi Santosh Vaishali	<u>Sakshi</u>
42	Salunkhe Jai Mangesh Manisha	—
43	/ Sayed Darnajaf Jalal Heena	—
44	Shaikh Mohammad Maroof Mohammad Sohail	<u>Maroof</u>
45	Shetty Nikhil Dayananda Shobha	<u>Nikhil</u>
46	Siddique Mohd Atif Mohd Sayeed Anwar Khadija	—
47	Yadav Vinayak Satish	—
48	Ansari Aaraf Asif Reshma	<u>Aaraf</u>
49	Chourasiya Ayush Nandulal	<u>Ayush</u>
50	Dalvi Amey Sandip Sharvari	<u>Amey</u>
51	Deepak Ramesh Sakha	<u>Deepak</u>
52	/ Dewoolkar Kripa Seema	<u>Kripa</u>
53	Gidh Saresh Rahul Shweta	<u>Saresh</u>
54	Harad Harshad Ramesh Rekha	—
55	/ Jain Yashvi Kishor Hemlata	<u>Yashvi</u>
56	/ Kamble Apurva Pradip Vidya	—
57	Kharat Prabhat Prakash Bharati	—



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58	Labde Kapil Shivnath Kavita	<u>Labde</u>
59	/ Mascarenhas Blossom Brian Jenita	—
60	Nadar Aakash Shivkumar Jeyathilaka	—
61	/ Paktekar Mrunmai Ramesh	<u>Mrunmai</u>
62	Philse Shravan Shivraj Jyoti	<u>Philse</u>
63	Puranik Aryan Milind Nivedita	<u>Amr</u>
64	/ Rajguru Pooja Santosh Suvaarna	—
65	/ Saha Anu Arunkumar Astam	<u>AST</u>
66	Shaikh Mohd Tasheef Mohdfarooq Talatafroz	—
67	Sharma Raman Lalchand Kavita	<u>Raf</u>
68	/ Shejwal Janhavi Dilip Anjali	<u>Janhavi</u>
69	Shinde Jashith Suresh Sadhana	<u>Jashith</u>
70	Tare Dhruv Rahul Mayuri	<u>Dhruv</u>
71	Vipaak Gaikwad Sudheer Varsha	<u>Vipaak</u>
72	Yerekar Prathamesh Ashok Asha	<u>Pratham</u>
73	Kurishinkal Mebin Emmanuel Merin	<u>Mebin</u>
74	Qureshi Mohd Anas Abdul Haq Ayesha	—
75	Nikhilesh Mahadik	<u>N. Mahadik</u>

Subject Incharge :- Dr. Aparna M. Telgote 8/9/26
— Mr. Deepak Pandar 8/9/26



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दूरसंचार प्रौद्योगिकी एवं प्रबंधन उत्कृष्टता केंद्र
Center for Excellence in Telecom Technology & Management

[आय.एस.ओ. 9001:2015 प्रमाणित]
[ISO 9001:2015 Certified]



MTNL
(A Govt. of India Enterprise)

कार्यालय : महाप्रबंधक, सीईटीटीएम, टेक्नोलॉजी स्ट्रीट, हिरानंदानी गार्डन्स, पवई, मुंबई - 400 076
O/o. GM, CETTM, Technology Street, Powai, Mumbai - 400 076

प्रोफार्मा इनवॉइस. 052 / PROFORMA INVOICE No.052

To,
Don Bosco Institute of Technology
Premier Automobiles Road, Kurla, Mumbai 400 070
Contact Person & No : Prof. Aparna Telgote Ph : 9930424664 Email -Id - aparna@dbit.in

No. CETTM/DM/(BD&PR)/Don Bosco Institute/2026-27/052 Dt.08-09-2026

Sub: सीईटीटीएम में आई.टी. के लिए प्रोफार्मा इनवॉइस / Proforma Invoice for Industrial Visit at CETTM

1	Client	Do Bosco Institute of Technology
2	Requirements: a) Infrastructure	a) Industrial Visit on 8 th Sept 2024 (39 Students)
3	Charges Applicable: a) Infrastructure	a) Rs 7800/- [@ Rs.200/- per participants]
4	CGST	Rs. 702/- [@ 9% CGST on Sr.3a]
5	SGST	Rs. 702/- [@ 9% SGST on Sr.3a]
6	Amount Payable	Rs 9204/- (Nine Thousands two hundred Four only)

उपरोक्त शुल्क का भुगतान डी.डी./एन.डी.एफ.टी./चेक के द्वारा "एमटीएनएल मुंबई" के नाम से किया जाए जिसका विवरण निम्न लिखित है:-
"MTNL Mumbai SI Account". Account No. 005705018513, IFSC Code: ICIC0000057, MICR CODE : 400229013 . यदि रकम की भुगतान टीडीएस काटने के पश्चात् किया जा रहा है, तो कृपया टीडीएस का विवरण ईमेल आईडी पर टीडीएस प्रमाण पत्र अवश्य भेजें : infra.cettm@gmail.com एमटीएनएल पैन नंबर -AAACM0828R, जीएसटी नंबर :27AAACM 0828R1Z3
PS:- The above charges may be paid through DD/Cheque/NEFT in favour of "MTNL Mumbai SI Account". Account No. 005705018513, IFSC Code: ICIC0000057, MICR CODE : 400229013. Kindly furnish the details of TDS if deducted and send TDS certificate on Email Id: infra.cettm@gmail.com
MTNL - PAN No.AAACM0828R, GST No.:27AAACM 0828R1Z3 .
Query wrt the Proforma & Final Invoice please contact Shudhanshu Kumar Mishra 25714900/9869055152.
Client In charge: Mr S K Mishra 9869055152/8928589710

Shudhanshu
उप प्रबंधक Dy. Manager
सी.ई.टी.टी.एम., एम.टी.एन.एल., पवई, मुंबई - ७६
C.E.T.T.M., M.T.N.L, Powai, Mumbai-76

सुधांशु
उप प्रबंधक (बी.डी. एवं पी.आर.)
सी.ई.टी.टी.एम, एम.टी.एन.एल.



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