BIRLA VISHVAKARMA MAHAVIDYALAYA

(An Autonomous Institution)

(Managed by CVM)

IE(I) Students' Chapter – Electrical Department

Chapter Code:388120/BVME/EL

Report of Student Activities for the academic year 2018-19

1.JSL INDUSTRIES LTD., MOGAR

Under IE(I) Electrical Students Chapter

Date - 15 February 2019

**Department of Electrical Engineering Birla
Vishvakarma Mahavidyalaya (Engineering College)**

Vallabh Vidyanagar

Date: **15/02/2019**

Venue & Place of Company: **JSL Industries ltd., Mogar**

Faculty Members:

Prof. Manish Sinha

Prof. Yogesh Prajapati

Co-ordinated by: **Prof. Manish Sinha**

Total Number of Students: **48 (3nd Year B.Tech students, Electrical)**

A technical tour for a day was organized for 3rd Year students of Electrical Engineering on 15th February, 2019 by the Electrical Engineering Department of our college Birla Vishvakarma Mahavidyalaya under IE(I) Electrical Students' Chapter. Students gathered at the college campus at around 12:15 pm and a total of 48 students registered themselves for the visit. We had 2 faculties from the Electrical Department along with us.

Introduction of Industry

JSL Industries Ltd. was established in the year 1966 along with other group companies like JEM Industries Ltd. and Jyoti Pumps & Electricals Ltd. In the year 2006, JEM Industries Ltd. and Jyoti Pumps & Electricals Ltd. were amalgamated with JSL Industries Ltd.

The range of products manufactured by JSL Industries Ltd, includes HT Indoor and Outdoor Instrument Transformers, Full and Reduced Voltage Motor Starters – Air Break and Oil Immersed, LT Power and Auxiliary Contactors, Thermal Overload Relays, LT ACBs, MCCBs, Control and Power Switches, LT Power and Motor Control Centres, LT Switchboards, LT Distribution Boxes, Mono-Block Pumps, TEFC, SPDP and VHS Motors, etc.

JSL Industries Limited, Mogar was initially started as a subsidiary company to M/s. Jyoti Ltd., Vadodara to supply various engineering products and components. Now we are a public limited company engaged in manufacturing LT Motors and Pumps, LT panels, LT Switchgear and Control gear products – Air Circuit Breakers, Contactors, Thermal overload Relay, Motor Starters, Cam Switches and HT Instrument Transformers.

JSL is the largest manufacturer of Oil Immersed starters in INDIA. They are also the largest supplier of 66 kV CTs to M/s. GETCO, Gujarat.

Departments

1) Instrument transformer

2) Switchgear

3) Low tension Switchboard

4) Air Circuit Breakers

5) Motor & Pump

First of all, we visited the manufacturing unit of instrument transformers. We saw the process of the coil assembly unit. We learned how coil winding is done inside the transformer. It requires a lot of accuracy and precision to design it as per the requirements. We saw the assembling & testing unit of the 33kv Current Transformer. We also get to know different types of current transformer based on its core like wound types CT and Split core current transformer. Then we saw the manufacturing of Auto Transformer starters, where we understand relays and star-delta starter and DOL starter. We saw the manufacturing unit of Induction motors. We saw the working and manufacturing of Slip-ring & Squirrel cage induction motors. Aluminium which is used for the rotor is being moulded over there. Then different testings were done on the induction motor. We also learned how important the use of motors in any industry is as upto 70% of the total industry load is being consumed by motors and it is the most vital equipment in industry.

<u>Conclusion</u>

The one day visit to JSL Industries, Mogar under IE(I) Electrical Student Chapter affiliated with Switchgear was a tremendous decision made by our faculty. All 3rd Year Electrical students got to learn a lot about how theoretical studies and practical applications are synonymous as well as different from each other. Hence one should definitely get involved in seeing applications practically making their knowledge about it sound and strong. Also various live tests were done in front of students. In all, it was a very knowledgeable and helpful visit for BVM T.Y. at JSL Industries.

2.REPORT of Expert lecture on "Machine Learning For Multidisciplinary Approach"

Date: **9 February, 2019**
Time: **11:30 am to 1:00pm**
Venue: **LRUC Hall**
Coordinators: **Prof. Manish N. Sinha**
Total Participants: **20 (1st , 2nd, 3rd Year students, Electrical)**

Introduction

In the field of computer science, Artificial Intelligence, sometimes called machine intelligence which is demonstrated by machines, in contrast to the natural intelligence displayed by humans and other animals. In other words an Artificial Intelligence refers to intelligence displayed by machines that simulate human and animal intelligence.

Objective

1. To have a basic understanding of some of the more advanced topics of AI such as learning, natural language processing, robotics, expert systems, and planning.

2. To have an understanding of the issues of knowledge representation and blind and heuristic search, as well as an understanding of other topics such as mini-max, resolution, etc. that plays an important role in AI programs.

3. To have a basic proficiency in a traditional AI language including an ability to write simple to intermediate programs and an ability to understand code written in that language.

Expert Talk

An expert lecture on "Machine Learning for Multidisciplinary Approach" was organized in LRUC Hall, B.V.M Engineering College, and V.V.Nagar under the IE (I) Students' Chapter Electrical. Expert from IT Department BVM, Prof. Krupali Shah delivered an expert lecture.
Prof. Krupali Shah shared her knowledge about Artificial Intelligence. She talked about the history of AI. She also talked about Robotics and Products of Machine learning, and showed some videos related to AI and ML.
She also talked about the application of Machine Learning in different engineering fields and Importance and scope of machine learning and AI in the upcoming future.
Students participated in the session with full enthusiasm and took a lot of interest.

Following topics were discussed:
- Deep learning.
- Robotics.
- Natural Language Processing.
- Reinforcement Learning.
- Artificial Neural Network.
- Expert System.
- Fuzzy System.

Conclusion

Overall, it was an informative lecture which will enhance the knowledge of students about the importance of Artificial intelligence and machine learning. They will also come to know how AI works in relation to their respective engineering field.

BVM Engineering College	
IE(I) Team[Student Chapter(Electrical)]	
Position	**Name**
Chairman	Prof. A.A. Sheikh
Faculty advisor	Prof. M. N. Sinha

List of students:

	Membership Number
Gajjar Yash Harshadbhai	BVMEE/001
Galav Minesh Bhatt	BVMEE/002
Gaurav Vinay Barve	BVMEE/003
Mihir Rajeshbhai Pandya	BVMEE/004
Jeel Vishalkumar Shah	BVMEE/005
Parekh Krupan Kumar Vijaybhai	BVMEE/006
Maskar Nehant Yogeshbhai	BVMEE/007
Pokar Dhruv Vithalbhai	BVMEE/008
Prince Kirankumar Patel	BVMEE/009
Viralkumar Ramubhai Patel	BVMEE/010
Vaibhav Kashinath Achegave	BVMEE/011
Zapadiya Sohil Rajeshbhai	BVMEE/012
Gohil Vishalkumar Rameshbhai	BVMEE/013
Dipen Narshinh Solanki	BVMEE/014
Mistry Harshit Sanjaykumar	BVMEE/015
Yashkumar Pravinchandra Rana	BVMEE/016
Neel Pravinbhai Patel	BVMEE/017

****