

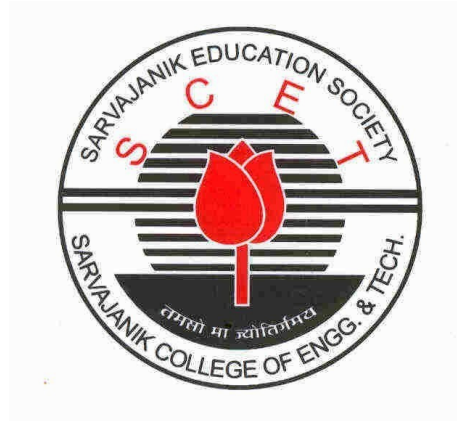
# **Sarvajanik College of Engineering & Technology**

## **Department of Electrical Engineering**

### **A Report on Expert Lecture**

**On**

### **Protection for Futuristic Power Systems**



**Speaker:** Dr. Manohar Singh

**Venue:** NJ Seminar Hall

**Date:** 18-01-2018

**Time:** 9:30 to 11:00 am

**Organized by:** Dr. Hiren Patel

The Department of Electrical Engineering, SCET, Surat had organized an Expert Lecture for BE-III, IV Year and ME students considering subject of their curriculum as Switch Gear and Protection. The Expert was Dr. Manohar Singh, currently working as an Engineering Officer in Power Systems Division at Central Power Research Institute (CPRI), Bangalore.

The session started with a welcome speech given by Dr. Hiren Patel. He also gave a brief introduction of Dr. Manohar Singh. Dr. Shabbir Bohra felicitated him with flowers.

The main topic of the talk was Futuristic Power system protection. In future, enormous amount of energy will be generated using Renewable Energy Resources such as Solar & Wind. Therefore, Protection system of future will be different from today's protection system. Adaptive protection system will be employed due to highly dynamic nature of wind and solar generation.

He had discussed about Mann & Morrison algorithm which is used to determine voltage dips for short duration of time. Features of numerical relays, digital relays and electromagnetic relays were also talked about. Protection system of transmission line was stated and stability in terms of critical clearing time of different substations was also discussed.

Protection system for micro grids was discussed. Impacts of Distributed Generation by renewable energy on protection system were explored considering different parameters such as fault in feed, stability of the system etc. He has shown a case study of Distributed Generation too.

The session ended with his vision towards power system protection in future followed by question-answer. Dr. Shabbir Bohra gave a vote of thanks speech on behalf of SCET. We were very grateful to Dr. Manohar Singh. It was a very informative and knowledge enhancing session for the students as they got to know many things apart from curriculum.

Some glimpses of the talk are shown below:



