Newsletter, January-June, 2016

Department of Electrical & Electronics Engineering

Website: https://bitswgl.ac.in/eee-department.php

HODs Note

Dr. S Manikandan
HOD, EEE

The department of Electrical & Electronics Engineering (EEE) has been started in 2007 with an intake of 60 students and with the growing demand for electrical engineering graduates; the intake has increased to 120 in the academic year 2012-13. The Department has well qualified and dedicated team of teaching staff members. A conductive environment exists in the department for both students and staff. Quality technical education is provided to the students in the core areas of the field to meet the challenges of globalization with the state of art equipments and laboratories.

Inside this issue:

VISION AND MISSION OF THE EEE DEPARTMENT

The department of EEE is working on the vision, "To nurture excellence in the field of Electrical & Electronics Engineering by imparting core values to the learners and to mould the institution into a centre of academic excellence and advanced research"

The mission to achieve above vision are:

- To impart students with high technical knowledge to make globally adept to the new Technologies
- To create, disseminate and integrate knowledge of engineering, science and technology that expands the electrical engineering knowledge base towards research
- To provide the students with a platform for developing new products and systems that can help industry and society as a whole.

PROGRAM EDUCATIONAL OBJECTIVES

- To prepare students with solid foundation in Mathematics, Sciences and Basic Engineering to cover multi-disciplinary subjects enabling them to comprehend, analyze Electrical & Electronics Engineering problems and develop solutions.
- To design and develop an electrical system component or process to meet the needs of society and industry with in realistic constraints.
- To prepare students with technical competence to use advance techniques, skills and modern engineering tools that allow them to work effectively as electrical and electronics engineer.

PROGRAM SPECIFIC OUTCOMES

- Apply fundamental knowledge to identify, analyze diverse problems associated with electrical and electronic circuits, power electronics drives and power systems.
- Understand the current technological developments in Electrical & Electronics Engineering and develop the innovative products/software to cater to the needs of society & Industry

Seminar:

- Department organized a seminar on “GSM Technology” for IV-Year B.Tech students on 17-03-2016

Workshops:

- Department organized a workshop on “Flexible Photovoltaic Technology” for III & IV-Year B.Tech students on 24-03-2016
- Department organized a workshop on “Solar PV Systems Design and Performance Evaluation” for III & IV-Year B.Tech students on 06-01-2016

Guest Lectures:

- Department organized a guest lecture on “The Opportunities in Higher Studies Abroad” for II-Year B.Tech students on 26-03-2016

B.Tech IV-Year students visited Central Power Research Institute (CPRI) at Hyderabad and Kolanupaka Temple on 21-01-2016

Placements

S.No.	H.T.No.	Name of the Student	Name of the Company
1	12C31A0233	Kuncham Sahithi	Satyam Tech
2	12C31A0203	Akuthota Anusha	
3	12C31A0282	Thoutam Sushmitha	
4	12C31A0272	Semsani Reshmi Sri	
5	13C35A0201	Aakula Sravan Kumar	
6	12C31A0285	Vanaparthi Niveditha	
7	12C31A0239	Mohammad Mohammadali	
8	12C31A0241	Mohammed Habeebuddin	
9	12C31A0250	Nathani Bharath	
10	12C31A0262	Polapelly Akhil	
11	12C31A0209	Balaboina Menaka	
12	12C31A0276	Soumya Sree Dodda	Hinduja Global Solutions
13	12C31A0230	Kondaparthi Harsha Teja	
14	12C31A0231	Kongara Vindhya	
15	12C31A0232	Kothula Shalini	
16	12C31A0234	Manga Sreekanth	
17	12C31A0235	Maraboina Radhika	
18	12C31A0236	Matta Sravan Reddy	
19	12C31A0237	Md Anwar Shareef	Vertex
20	12C31A0238	Merugu Naresh	
21	12C31A0240	Mohammad Mubinpasha	
22	12C31A0210	Banothu Premsingh	
23	12C31A0211	Bathini Umesh	
24	12C31A0216	Chintha Nagarajuna	Aliens Group
25	12C31A0217	Dharavath Anusha	
26	12C31A0218	Doodam BuchiBabu	
27	12C31A0219	Engala Divya	
28	12C31A0220	Gannarapu Kiran	
29	12C31A0243	Mohammed Thousif Anwar	Suryatech Solutions
30	12C31A0244	MohdAzaruddin	
31	12C31A0245	Mothukuri Santhosh Kumar	
32	12C31A0246	Mounika Gopu	
33	12C31A0248	Nallella Aravind	
34	12C31A0249	Naresh Banoth	
35	12C31A0260	Peruvaram Prashanth	
36	12C31A0263	Pujari Vinay	
37	12C31A0264	Puli Akhil Kumar	
38	12C31A0265	Rakam Rajashekar	
39	12C31A0266	Ranipet Sufian	
40	13C35A0205	Enjamuri Manasa	Uplus Technologies Pvt.Ltd.
41	13C35A0207	Kurapati Sai Kumar	
42	13C35A0208	Pandavula Umadevi	
43	13C35A0209	Reddy Shravan Kumar	
44	13C35A0212	Shivarathri Akhil	
45	12C31A0284	Vallala Sravan kumar	Supreme Inustries
46	12C31A0287	Veerla Ranadheer	
47	12C31A0288	Veldandi Laxman	
48	12C31A0290	Velpula Sahithya	
49	12C31A0291	Velupula Sri Kavya	
50	12C31A0292	Vemula Sneha	
51	12C31A0293	Voleti Yashwanth	
52	12C31A0251	Neela Karthik Kumar	
53	12C31A0252	Nimmala Sandeep	

FACULTY ARTICLE:

ELECTROPHOROUS

The electrophorus consists of a dielectric plate {originally a 'cake' of resinous material such as pitch or wax, but in modern versions plastic is used) and a metal plate with an insulating handle. The dielectric plate is first charged through the triboelectric effect by rubbing it with fur or cloth. For this discussion, imagine the dielectric gains negative charge by rubbing, as in the illustration below. The metal plate is then placed onto the dielectric plate. The dielectric does not transfer a significant fraction of its surface charge to the metal because the microscopic contact is poor. Instead the electrostatic field of the charged dielectric causes the charges in the metal plate to separate. It develops two regions of charge - the positive charges in the plate are attracted to the side facing down toward the dielectric, charging it positively, while the negative charges are repelled to the side facing up, charging it negatively, with the plate remaining electrically neutral as a whole. Then, the side facing up is momentarily grounded {which can be done by touching it with a finger), draining off the negative charge. Finally, the metal plate, now carrying only one sign of charge {positive in our example), is lifted.

Since the charge on the dielectric is not depleted in this process, the charge on the metal plate can be used for experiments, for example by touching it to metal conductors allowing the charge to drain away and the uncharged metal plate can be placed back on the dielectric and the process repeated to get another charge. This can be repeated as often as desired, so in principle an unlimited amount of induced charge can be obtained from a single charge on the dielectric. For this reason Volta called it elettroforo perpetuo {the perpetual electricity bearer). In actual use the charge on the dielectric will eventually {within a few days at most) leak off through the surface of the cake or the atmosphere to recombine with opposite charges around to restore neutrality.

Charge in the universe is conserved. The electrophorus simply separates positive and negative charges. A positive or negative charge ends up on the metal plate {or other storage conductor), and the opposite charge is stored in another object after grounding {in the earth or the person touching the metal plate). This separation takes work since the lowest energy state implies uncharged objects. Work is done by raising the charged metal plate away from the oppositely charged resinous plate. This additional energy put into the system is converted to potential energy in the form of charge separation {opposite charges that were originally on the plate}, so raising the metal plate actually increases its voltage relative to the dielectric plate.

The electrophorus is thus actually a manually operated electrostatic generator, using the same principle of electrostatic induction as electrostatic machines such as the Wimshurst machine and the Van de Graaff generator.

Mr.M.Karthik Reddy,
Asst.Prof., EEE