NARAYANA ENGINEERING COLLEGE::NELLORE

REPORT ON GUEST LECTURE

1	Name of the Activity/Event	" **Basics of Electrical power Transmission System**"		
2	Date of Activity/Event	15/7/2018		
3	Organized by/Name of the committee	EEE Department		
4	Place of Activity/event	Edison Auditorium		
5	Resource person/guest/organization	Dr.G.Jaya Krishna, Professor, NECN		
6	Type of activity/Event	Guest lecture		
7	Activity/Event objectives	knowledge		
8	Participation	Students	Faculty	Total Participation
		98	03	101
9	General remarks	1.Need more Explanation 2.Fast Delivery		
10	Suggested Improvements	Need full day session		
11	Enclosures	1.Report 2.Photos 3.Attendance		

A Guest lecture on "Basics of Electrical power Transmission System" was organized by Electrical and Electronics Engineering department, on 15th july 2018 at the Edison Auditorium, Narayana Engineering College, Nellore. In this session they discussed about the electrical power transmission involves the bulk movement of electrical energy from a generating site, such as a power station or power plant, to an electrical substation where voltage is transformed and distributed to consumers or other substations. The interconnected lines that enable the movement of electrical energy are known as a "transmission network," and these form an electrical power transmission system—or, as it is more commonly known, the power grid. Also They Discussed About Electric power is commonly (or usually) generated at 11 kV in generating stations in India and Europe. While in some cases, generation voltage might be higher or lower. Generating machines, to be used in power stations, are available between 6 kV to 25 kV from some big manufacturers. This generating voltage is then

stepped up to 132kV, 220kV, 400kV or 765kV etc. Stepping up the voltage level depends upon the distance at which power is to be transmitted. Longer the distance, higher will be the voltage level. Stepping up of voltage is to reduce the I^2R losses in transmitting the power (when voltage is stepped up, the current reduces by a relative amount so that the power remains constant, and hence I^2R loss also reduces). This stage is called as primary transmission.The voltage is the stepped down at a receiving station to 33kV or 66kV. Secondary transmission lines emerge from this receiving station to connect substations located near load centers (cities etc.).The voltage is stepped down again to 11kV at a substation. Large industrial consumers can be supplied at 11kV directly from these substations. Also, feeders emerge from these substations. This stage is called as primary distribution.

Feeders are either overhead lines or underground cables which carry power close to the load points (end consumers) up to a couple of kilometers. Finally, the voltage is stepped down to 415 volts by a pole-mounted distribution transformer and delivered to the distributors. End consumers are supplied through a service mains line from distributors. The secondary distribution system consists of feeders, distributors and service mains.


Capacitors and Capacitance
+Q
-Q
Uses: storing and releasing electric charge energy
Most electronic capacitors: micro-Farads (μF),
pico-Farads (pF) = 10^{-12} F
New technology:
compact 1 F capacitors
Units of capacitance:
Farad (F) = Coulomb/Volt

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