

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
SYLLABUS OF B.E IV- SEMESTER
BASICS OF ELECTRICAL POWER GENERATION (Open Elective –III)

Instruction: 2 Hrs /week	SEE Marks :60	Course Code :OE430EE
Credits :2	CIE Marks: 40	Duration of SEE : 3Hrs

Course Objectives	Course Outcomes
Is to provide the knowledge about the electrical power generation from conventional energy sources and cost of the electrical power.	<p>At the end of the course students will be able to</p> <ol style="list-style-type: none"> 1. Describe sources of energy and types of power plants. 2. Enumerate the factors effecting choice of thermal ,hydal and nuclear power generation 3. Illustrate the advantages and disadvantages of thermal ,hydal and nuclear power generation 4. Estimate the cost of electrical energy consumed

Unit-I Introduction:

Electric power generation scenario in INDIA from Conventional and non conventional sources of energy. Advantages and disadvantages with conventional and non-conventional energy sources.

Unit-II Steam power station:

Schematic arrangement, selection of site, Environmental aspects for selecting the sites and locations of thermal power stations, advantages and disadvantages

Unit-III Hydro power station:

Schematic arrangement, choice of site selection of hydro power. Environmental aspects advantages and disadvantages

Unit-IV Tariff

Electrical energy calculation in units. Cost of electrical energy, load factor and demand factor, tariff method- flat rate, block rate, two part.

Books

a) Textbooks:

1. M.L.Soni,P.V Gupta,U.S Bhatnagar and A.Chakraborti "A text book on Power System Engineering" Dhanpat Rai & Co.Pvt.Ltd.1999.
2. V.K Mehta and Rohit Mehta "Principles of Power Systems" S.Chand & company LTD, New Delhi 2004.

b) Reference Book

1. S.N.Singh "Electrical Power Generation, Transmission and Distribution",PHI, 2003.
2. GD Rai "Non Conventional Energy Sources "Khanna Publishers, 4th edition 2000.
3. Electrical Power, Dr. S.L. Uppal.