

# SAMSKRUTI COLLEGE OF ENGINEERING & TECHNOLOGY

## Lesson Plan(2017-18)

**Subject : ELECTRICAL DISTRIBUTION SYSTEMS**

**NAME OF THE FACULTY: K.PRATHIBHA**

Sl. No.	Name of the Topic	No. of Classes required	Cumulative number of period
<b>UNIT – I : Introduction &amp; General Concepts</b>			
1.	Introduction to distribution systems	01	01
2.	Load modeling & Characteristics	01	02
3.	Coincidence factor, contribution factor loss factor	01	03
4.	Relationship between factor & Loss factor	02	05
5.	Classification of load ( Residential , commercial, agricultural & Industrial ) and other characteristics	02	07
<b>UNIT – II : Distribution Feeders &amp; Substations</b>			
6.	Design consideration of distribution feeders	01	08
7.	Radial & Loop types of primary feeders	01	09
8.	Voltage levels	02	11
9.	Feeder loading	01	12
10.	Basic design practice of secondary distribution system	02	14
11.	Problems	02	16
12.	Location of substation	02	18
13.	Rating of distribution substation	02	20
14.	Service area within primary feeders	02	22
15.	Benefits derived through optimal location of substation	02	24
<b>UNIT – III: Distribution System Analysis</b>			
16.	Voltage drop & Power loss calculations	02	26
17.	Derivation for voltage drop & power loss in lines	02	28

18.	Manual methods of solution for radial networks	03	31
19.	Three phase balanced primary lines	02	33
<b>UNIT – IV : Protective Devices &amp; Coordination</b>			
20.	Objectives of distribution system protection	01	34
21.	Types of common faults	02	36
22.	Procedure for fault calculation	01	37
23.	Principles of operation of fuses , circuit reclosers	02	39
24.	Line specialises & circuit breakers	01	40
25.	Coordination of protective devices	01	41
26.	General co-ordination procedure	01	42
27.	Coordination of Fuse – Fuse	01	43
28.	Coordination of Fuse & Circuit – Breaker	01	44
29.	Coordination of CB & CB	02	46
30.	Coordination of CB & Line sectionalizer	01	47
<b>UNIT – V : Voltage Control &amp; Power Factor Improvement</b>			
31.	Capacitive compensation for power factor control	02	49
32.	Different types of power capacitors	01	50
33.	Shunt & series capacitors	01	51
34.	Effect of shunt capacitors ( fixed & switched ) power factor correction	01	52
35.	Capacitor allocation, economic justification	02	54
36.	Procedure to determine the best capacitor location	01	55
37.	Voltage controls	01	56
38.	Equipment for voltage control	01	57
39.	Effect of AVB / AVR	02	59
40.	Effect of series capacitor, Line drop compensation	01	60