

ANDHRA LOYOLA INSTITUTE OF ENGINEERING AND TECHNOLOGY
VIJAYAWADA-520008
Department of Electrical & Electronics Engineering
Academic Year 2021-22
Lesson Plan

Name of the faculty : **G.GANTAIASWAMY**
 Course Name : **switch gear and protection** Course Code : **RT31022**
 Program : **B.Tech**
 Branch : **EEE** Semester : **Odd**

Sl No.	Topics to be covered	Ref with page No.	Teaching Method	No of hours required
Circuit breakers				
1	Elementary principles of arc interruption	T1(1-2)	Chalk & Talk	2
2	Restring and recovery voltages, restrike phenomenon	T1(14-17)	Chalk & Talk	2
3	Average and max. rrrv, current chopping, resistance switching	T1(20-22)	Chalk & Talk	2
4	Air blast, vacuum, sf6 circuit breakers	T1(4-6)	Chalk & Talk	2
5	Circuit breaker ratings and specifications, auto reclosing	T1(8-10)	Chalk & Talk	2
Total no of hours required				10
Electromagnetic protection				
6	Principle of operation and construction of attracted armature, balanced beam relays	T1(4-5)	Chalk & Talk	02
7	Induction cup and disc relays	T1(26-27)	Chalk & Talk	02
8	Relay classifications and application of relays	T1(25-26)	Chalk & Talk	01
10	Directional and differential relays	T1(4-5)	Chalk & Talk	02
11	Distance relays	T1(8-8)	Chalk & Talk	03
12	Problems	T1(113-14)	Chalk & Talk	2
13	Problems	T1(113-14)	Chalk & Talk	2
Total no of hours required				12
Generator and transformer protection				
14	Protection of generators against stator and rotor faults and abnormal conditions	T1(100-01)	Chalk & Talk	2
15	Restricted earth fault and inter turn fault protection	T1(100-100)	Chalk & Talk	2
16	Percentage differential protection	T1(104-05)	Chalk & Talk	2
17	Buchholz relay protection	T1(105-06)	Chalk & Talk	2
18	Design of ct ration and numerical problems	T1(107-08)	Chalk & Talk	3
Total no of hours required				11
Feeder and bus bar protection				

19	Over current,carrier current protection	T1(122-23)	Chalk & Talk	03
20	Three zone distance relay using impedance relays	T1(122-23)	Chalk & Talk	03
21	Translay protection of bus bars	T1(128-29)	Chalk & Talk	02
22	Differential protection	T1(129-130)	Chalk & Talk	02
Total no of hours required				10
Static and digital relays				
23	Static relay components	T1(154)	Chalk & Talk	02
24	Static over current and distance relays	T1(156-62)	Chalk & Talk	02
25	Microprocessor based digital relays	T2(6.1)	Chalk & Talk	02
Total no of hours required				06
Protection against over voltages and grounding				
26	Protction against lighting over voltages	T1(191-192)	Chalk & Talk	2
44	Insulation coordination	T1(192)	Chalk & Talk	2
45	Ground and ungrounded neutral systems	T1(197-198)	Chalk & Talk	2
46	Methods of neutral grounding	T1(195)	Chalk & Talk	4
Total no of hours required				10

TOTAL NUMBER OF HOURS REQUIRED =61

Text books:

T1. SWITCH GEAR AND PROTECTION BY U.V BAKSHI

T2. POWER SYSTEM PROTECTION AND SWITCHGEAR BY BADRIRAM AND D.N VISHWAKARMA.

Faculty

Subject Coordinator

HOD