

Badriprasad Institute of Technology, Sambalpur**Lesson plan for Theory -2, Switch Gear & Protective Device****Semester & Branch : 6th Sem Electrical Engineering****Total Periods-75****Name of the faculty : Sachin Kumar Satpathy****No of periods /week-5**

WEEK	CLASS DAY	THEORY
1ST	1ST	ESSENTIAL FEATURES OF SWITCH GEAR
	2ND	SWITCH GEAR EQUIPMENTS
	3RD	BUS BAR ARRANGEMENTS
	4TH	SWITCH GEAR ACCOMODATION
	5TH	SHORT CIRCUIT
2ND	1ST	FAULTS IN POWER SYSTEM
	2ND	SYMMETRICAL FAULTS ON 3PHASE SYSTEM
	3RD	LIMITATION OF FAULT CURRENTS
	4TH	PERCENTAGE REACTANCE & BASE KVA
	5TH	SHORT CIRCUIT KVA
3RD	1ST	REACTOR CONTROL OF SHORT CIRCUIT CURRENT
	2ND	LOCATION OF REACTORS
	3RD	STEPS FOR SYMMETRICAL FAULT CALCULATION
	4TH	NUMERICAL RELATED TO SYMMETRICAL FAULT
	5TH	DESIRABLE CHARACTERISTICS OF FUSE ELEMENT
4TH	1ST	FUSE ELEMENT MATERIALS
	2ND	TYPES OF FUSES
	3RD	LOW AND HIGH VOLTAGE FUSES
	4TH	CURRENT CARRYING CAPACITY OF FUSE ELEMENTS
	5TH	DIFFERENCE BETWEEN FUSE & CIRCUIT BREAKER
5TH	1ST	PRINCIPLE OF CIRCUIT BREAKER
	2ND	PRINCIPLE OF ARC EXTINCTION
	3RD	METHODS OF ARC EXTINCTION
	4TH	DEFINITION OF ARC VOLTAGE ,RESTRICKING VOLTAGE
	5TH	CLASSIFICATION OF CIRCUIT BREAKER
6TH	1ST	OCB & ITS CLASSIFICATION
	2ND	PLAIN BREAK OIL CIRCUIT BREAKER
	3RD	ARC CONTROL OIL CB
	4TH	LOW OIL CB
	5TH	MAINTENANCE OF OCB
7TH	1ST	AIR BLAST CIRCUIT BREAKER
	2ND	SF6 CIRCUIT BREAKER
	3RD	VACUME CIRCUIT BREAKER
	4TH	SWITCH GEAR COMPONENTS
	5TH	PROBLEMS OF CIRCUIT INTERRUPTION
8TH	1ST	RESISTANCE SWITCHING
	2ND	CIRCUIT BREAKER RATING
	3RD	CLASS TEST
	4TH	DEFINITION OF PROTECTIVE RELAY
	5TH	BASIC RELAY OPERATION

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9TH	1ST	DEFITION OF DIFFERENT TERMS
	2ND	INDUCTION TYPE OVER CURRENT RELAY
	3RD	INDUCTION TYPE DIRRECTIONAL POWER RELAY
	4TH	CURRENT DIFFERENTIAL RELAY
	5TH	VOLTAGE BALANCED DIFFERENTIAL RELAY
10TH	1ST	TYPES OF PROTECTION
	2ND	PROTECTION OF ALTERNATOR
	3RD	BALANCED EARTH FAULT PROTECTION
	4TH	PROTECTION SYSTEMS FOR TRANSFORMER
	5TH	BUCHHOLZ RELAY
11TH	1ST	PROTECTION OF BUS BAR
	2ND	PROTECTION OF TRNASMISSION LINE
	3RD	PROTECTION OF FEEDER
	4TH	VOLTAGE SURGE
	5TH	INTERNAL CAUSE OF OVER VOLTAGE
12TH	1ST	EXTERNAL CAUSE OF OVER VOLTAGE
	2ND	MECHANISM OF LIGHTNING DISCHARGE
	3RD	TYPES OF LIGHTNING STROKES
	4TH	LIGHTNING ARRESTER
	5TH	SURGE ABSORBER
13TH	1ST	ADVANTGE OF STATIC RELAY
	2ND	PRINCIPLE OF IDMT RELAY
	3RD	CLASS TEST
	4TH	CLASS TEST
	5TH	CLASS TEST
14TH	1ST	REVISION OF PROTECTIVE RELAY
	2ND	REVISION OF SWITCHGEAR
	3RD	REVISION OF FAULT CALCULATION
	4TH	OBJECTIVE TYPES QUESTION DISCUSSION
	5TH	REVISION OF FUSES
15TH	1ST	REVISION OF CIRCUIT BREAKERS
	2ND	NUMERICALS RELATED TO FAULT CALCULATIONS
	3RD	NUMERICALS RELATED TO FAULT CALCULATIONS
	4TH	REVISION OF PROTECTIVE RELAY
	5TH	SEMESTER PATTERN EXAM (80 MARKS)

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