

GOVERNMENT POLYTECHNIC, LAKHISARAI

Department of Electrical Engineering

Subject- Switchgear and protection

Code- 1620501

Semester- V th

Session- 2020-21

Lecture No.	MODULE	Topic	Scheduled Dates	Remarks
1	Module-1	Lecture 1: Necessity & functions of protective systems.	04-08-20	
2		Lecture 2: Normal & abnormal conditions.	05-08-20	
3		Lecture 3: Types of faults & their causes.	06-08-20	
4		Lecture 4: Short circuit calculation (symmetrical faults only)	07-08-20	
5		Lecture 5: Use of current limiting reactors & their arrangements.	10-08-20	
6		Lecture 6: HRC fuses – construction, types, working.	12-08-20	
7		Lecture 7: HRC fuses- characteristics, selection, and application	13-08-20	
8		Lecture 8: Isolators- vertical break, horizontal break & pantograph type.	14-08-20	
9		Lecture 9: Arc formation process, methods of arc extinction..	17-08-20	
10		Lecture 10: Circuit breakers – Concept, Classification, working principle.	18-08-20	
11		Lecture 11: Circuit breakers- construction, specification & application.	19-08-20	
12		Lecture 12: H.T- Bulk oil circuit breaker, Minimum oil circuit breakers (M.O.C.B)	20-08-20	
13		Lecture 13: SF6 Circuit breakers, Vacuum circuit breakers.	21-08-20	
14		Lecture 14: L.T – Air circuit breakers (ACB), MCCB, MCB.	24-08-20	
15		Quiz - 1		
16	Module-2	Lecture 15: ELCB or RLCB, Comparison of fuses & MCCB.	25-08-20	
17		Lecture 16: Selection of MCCB for motors	26-08-20	
18		Lecture 17: Selection and rating of circuit breakers.	27-08-20	
19		Lecture 18: Requirements – Relay time, related terms.	28-08-20	
20		Lecture 19: Classification- Electromagnetic attraction, induction.	31-08-20	
21		Lecture 20: Static & micro-processor based relay.	01-09-20	
22		Lecture 21: Protective transformers.	02-09-20	
23		Lecture 22: Over current relay- Time current characteristics.	03-09-20	
24		Lecture 23: Static over current relay.	04-09-20	
25		Lecture 24: Micro-processor based over current relay.	07-09-20	
26	Lecture 25: Distance relaying- principle, static, Micro-processor based	08-09-20		
27	Lecture 26: Differential relay	09-09-20		
28		Quiz- 2		
29	Module-3	Lecture 27: Abnormalities & faults	10-09-20	
30		Lecture 28: Differential protection	11-09-20	
31		Lecture 29: Overcurrent, earth fault.	14-09-20	
32		Lecture 30: interturn fault, negative phase sequence.	15-09-20	
33		Lecture 31: Over heating protection.	16-09-20	
34		Lecture 32: Reverse power protection.	17-09-20	
35		Lecture 33: numericals based on differential protection	18-09-20	
36		Lecture 34: Numericals on relay setting	21-09-20	
37		Lecture 35: Protection on transformer	22-09-20	
38		Lecture 36: Differential, over current.	23-09-20	
39		Quiz- 3		
40	Module-4	Lecture 37: earth fault, restricted earth fault, over heating protection.	24-09-20	
41		Lecture 38: Buchholtz relay	25-09-20	
42		Lecture 39: Numericals on differential protection	28-09-20	
43		Quiz- 4		
44	Module-5	Lecture 40: Protection of motors	29-09-20	
45		Lecture 41: Motor abnormalities and faults.	30-09-20	
46		Lecture 42: Short circuit protection, overload protection	01-10-20	
47		Lecture 43: Single phase preventor.	05-10-20	
48		Quiz- 5		

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