

Training Schedule for Protective Relaying and Safety

SL. No.	Subject	Date	Time		Resource Person
Day-1					
1.	System Protection Basics, Reliability, selectivity, stability, speed, Sensitivity of Relay. Construction of relay-electromechanical, static, numerical	04/12/2016	9:00AM	11:00AM	Abu Isha Md. Sajed Arefin, Executive Engineer
2.	Types of protective relay : Current protection (O/C, E/F, differential, REF) Voltage protection (O/V, U/V) combined protection (Distance, DOC, DEF) frequency relay, Bus bar arrangement and interlocking Protective Relaying Zones of Protection, main and backup protection, device numbering of protection functions, Tripping circuits, TCSR. synchronizing system		11:10AM	13:10PM	Abu Isha Md. Sajed Arefin, Executive Engineer
3.	Power system faults, Calculation of Fault current (Symmetrical & unsymmetrical Faults)		14:20PM	16:30PM	Engr. Ismail Hossain, PEng. SE, PGCB
Day-2					
4.	Fault calculation tutorial	05/12/2016	9:00AM	11:00AM	Engr. Ismail Hossain, PEng. SE, PGCB
5.	Protection of Distribution lines, Over Current and earth fault Protection connection diagram of O/C & E/F Relay (3O O/C+E/F), (2O O/C+E/F), Directional protection, protection of radial Feeder, Parallel feeder, Ring main system.		11:10AM	13:10PM	Syed Abadullah Haider Ali, Executive Engineer
6.	Protection of transmission lines, long line, short line, protection philosophy, distance protection characteristic impedance relay, Mho relay, Quadrilateral relay.		14:20PM	16:30PM	Syed Abadullah Haider Ali, Executive Engineer
Day-3					
7.	Auto re-closing in power system, dead time reclaim time, power swing, switch on to fault, VT fail Distance Protection scheme, Tele-protection Commands, Inter Tripping, Method of signaling (DTT, PUTT, POTT, Blocking schemes).	06/12/2016	9:00AM	11:00AM	Syed Abadullah Haider Ali, Executive Engineer

8.	time graded Over current and earth fault protection, Characteristic curve, plug setting multiplier, time setting multiplier, relay co-ordination of distribution feeders.		11:10AM	13:10PM	Engr. Kamrul Ahsan, Chief Engineer Transmission, PGCB
9.	tutorial on relay co-ordination		14:20PM	16:30PM	Engr. Kamrul Ahsan, Chief Engineer Transmission, PGCB
	Day-4	07/12/2016			
10.	Transformer Protection, protection groups, internal and external faults of Power transformer, O/C and E/F relay, Differential Relay, REF Relay, Sensitive E/F, over flux, Transformer self protection : Buchholz relay, Oil temperature relay, winding temperature relay, pressure relief device.		9:00AM	11:00AM	Engr. Kamrul Ahsan, Chief Engineer Transmission, PGCB
11.	Testing of power transformer- Name plate data short ckt. Test, open ckt. Test, magnetic balance, % imp, winding resistance vector group etc. Bus bar & breaker failure protection system, High and low impedance bus bar protection, centralized and decentralized system, end fault protection.		11:10AM	13:10PM	Abu Isha Md. Sajed Arefin, Executive Engineer
12.	Electrical Risk, Hazard, Consequences and mitigation / corrective measures		14:20PM	16:30PM	Engr. Md. Hamidul Hoque, PEng.
	Day-5	8/12/2016			
13.	Safety during project construction		9:00AM	11:00AM	Do
14.	Safety during project construction		11:10AM	13:10PM	Do
15.	Safety Operation and maintenance of equipment Electrical faults.		14:20PM	16:00PM	Do
16.	Conclusion & Certificate Awarding		16:00PM	16:30PM	Co-ordinator & IEB Officials

Engr. Md. Ismail Hossain, PEng.
 Convenor
 Training Program, EED, IEB

Engr. Md. Hamidul Hoque, PEng.
 Chairman
 EED, IEB

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 Secretary
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