Code	Training Module	Subject covered	Who can benefit	Course Period(Days)	Course Fee
T1	Basics of Circuit protection and IEC/IS Regulations	<ol> <li>Circuit protection understanding</li> <li>IEC/IS regulations for circuit protection</li> <li>Application examples</li> </ol>	1. Design Engineers 2. Maintenance engineers 3. Site Engineers	1	Rs 1500/-
T2	Solution for Final Distribution in an Electrical network/Residual current protection solution for polluted electrical network	<ol> <li>Selection criteria</li> <li>Application based control and protection</li> <li>understanding different regulations</li> </ol>	<ol> <li>Site electrical engineers from contracting companies</li> <li>Design engineers</li> <li>Facility engineers</li> </ol>	1	Rs 1500/-
Т3	Switching and Protection solutions for Renewable Energy application - Wind	<ol> <li>Application understanding of electrical distribution in wind power</li> <li>Protection philosophy - wind energy application</li> <li>Selection criteria of switchgear in wind mill application</li> </ol>	<ol> <li>Design engineers from wind mill manufacturers</li> <li>Maintenance engineers</li> <li>Site engineers from EPC contractors</li> </ol>	1	Rs 1500/-
T4	Switching and Protection solutions for Renewable Energy application - Solar	<ol> <li>Application understanding of electrical distribution in solar power</li> <li>Protection philosophy - solar energy application</li> <li>Selection criteria of switchgear for DC network and AC network</li> </ol>	<ol> <li>Design engineers from solar power plant manufacturers</li> <li>Maintenance engineers</li> <li>Site engineers from EPC contractors</li> </ol>	1	Rs 1500/-
Τ5	Understanding application of Lightening and Surge protection	<ol> <li>Effects of surge and lightening protection in buildings and industry</li> <li>Understanding remedial methods against surge and lightening protection</li> <li>Selection criteria for Lightening and surge protection devices</li> </ol>	<ol> <li>Electrical network design engineers</li> <li>Site electrical engineers</li> <li>Engineering team from EPC contractors</li> </ol>	1	Rs 1500/-
T6	Electrical network consideration for Hospitals	<ol> <li>Understanding of Hospital Electrical Distribution</li> <li>Safety consideration in electrical distribution in Hospitals</li> <li>protection device consideration in Hospitals</li> </ol>	<ol> <li>Electrical design engineers</li> <li>Maintenance engineers from Hospitals</li> <li>Engineers from EPC contractors</li> </ol>	1	Rs 1500/-
Τ7	Electrical network consideration for Data centers	<ol> <li>Understanding of Electrical Distribution in data centers</li> <li>Understanding TIER redundancy</li> <li>Solution for Data centers</li> </ol>	<ol> <li>Electrical design engineers</li> <li>Facility engineers from software industry/Data centers</li> <li>Engineers from EPC contractors</li> </ol>	1	Rs 1500/-
Т8	Energy Management solutions and understanding sub-metering application	<ol> <li>Basic understanding of energy management system</li> <li>Understanding concept of sub-metering solutions</li> <li>Benefits of Energy management systems</li> </ol>	<ol> <li>Electrical design engineers</li> <li>Facility managers/Maintenance managers</li> <li>Engineers from EPC contractors</li> </ol>	1	Rs 1500/-
Т9	Green Building and Energy efficiency with intelligent building solution(KNX)	<ol> <li>Understanding requirement of Green buildings concepts</li> <li>Energy efficiency solutions</li> <li>Benefits of intelligent building solutions</li> </ol>	<ol> <li>Architectural engineers</li> <li>Design engineers from Developers/Consultants</li> <li>Engineers from contractors</li> </ol>	1	Rs 1500/-



Code	Training Module	Subject covered	Who can benefit	Course Period(Days)	Course Fee
T10	IEC / IS regulation in Low voltage switchgear assembly	<ol> <li>Latest developments in IEC regulation</li> <li>Heating in LV installation</li> <li>Forms of construction/Testing in accordance IEC 60439</li> </ol>	1	Rs 1500/-	
T11	Type tested enclosures system in LV application	<ol> <li>Understanding TTA(type tested) and Partially TTA solutions</li> <li>Understanding supplementary test requirement in Low voltage switchgear</li> <li>ABB solutions for LV power distribution.</li> </ol>	<ol> <li>Design engineers</li> <li>Maintenance engineers/Facility engineers</li> <li>Site engineers</li> </ol>	1	Rs 1500/-
T12	Application of Circuit Breakers	<ol> <li>Understanding various application requirement in electrical distribution</li> <li>Sizing and selection of circuit breakers.</li> <li>Understanding communication requirements in circuit breakers</li> </ol>	<ol> <li>Engineers from Panel building industry</li> <li>Maintenance/Facility engineers</li> <li>Design engineers</li> </ol>	2	Rs 1500/-
T13	Circuit Breakers - Standards and Regulations	<ol> <li>Circuit breaker standards</li> <li>General definitions in accordance to regulations</li> <li>Understanding testing criteria for circuit breakers</li> </ol>	<ol> <li>Design engineers</li> <li>Engineers from panel building industry</li> <li>Engineers from commissioning/site engineers</li> </ol>	1	Rs 1500/-
T14	Course on Network Design Software of ABB	<ol> <li>Method of short circuit calculations in LV network</li> <li>Network calculation understanding in DOC software</li> <li>Switchboard configuration through CAT software</li> </ol>	<ol> <li>Design engineers</li> <li>Engineers from EPC contractors</li> <li>Maintenance engineers</li> </ol>	2	Rs 1500/-
T15	Protection Coordination and Selectivity	<ol> <li>Understanding selectivity</li> <li>Understanding back up protection</li> <li>Coordination of circuit breakers</li> </ol>	<ol> <li>Design engineers</li> <li>Engineers from EPC contractors</li> <li>Maintenance engineers</li> </ol>	1	Rs 1500/-
T16	Circuit Breaker Protection Releases	<ol> <li>Understanding of protection functionalities</li> <li>Basics of curves in LV circuit breakers</li> <li>Implementation of protection in LV network</li> </ol>	<ol> <li>Maintenance engineers</li> <li>Design engineers</li> <li>Engineers from panel building industry</li> </ol>	1	Rs 1500/-
T17	Selection of Circuit Breakers - Application based	<ol> <li>Understanding DC switching consideration</li> <li>Suitability of circuit breakers for variable frequency application</li> <li>Protection criteria in LV network</li> </ol>	<ol> <li>Design engineers</li> <li>Maintenance engineers</li> <li>Facility engineers</li> </ol>	1	Rs 1500/-
T18	Fuse technology in Power Distribution	<ol> <li>International regulations on Power distribution public areas</li> <li>Fuse technology - Advantages</li> <li>Utilization categories in switches</li> </ol>	<ol> <li>Maintenance engineers from process industries</li> <li>Design engineers</li> <li>Engineers from Utility companies</li> </ol>	1	Rs 1500/-



Code	Training Module	Subject covered	Who can benefit	Course Period(Days)	Course Fee
T19	Motor control & protection	<ol> <li>Motor control philosophy</li> <li>Protection criteria in Motor applications</li> <li>Innovative solutions in motor control and protection.</li> </ol>	<ol> <li>Design engineers from OEM of Machine tools/Pump manufacturers</li> <li>Maintenance engineers</li> <li>Engineers from process industries</li> </ol>	1	Rs 1500/-
T20	Application of control relays and safety in Machines	<ol> <li>Application of safety and control relays in machines</li> <li>Selection criteria for power supplies and sizing of power supplies</li> <li>Safety solutions for industries</li> </ol>	<ol> <li>Design engineers OEM machine manufacturers</li> <li>Maintenance engineers from Auto/Paper/Cement/engineering industry</li> </ol>	1	Rs 1500/-
T21	Intelligent Motor Management solutions	<ol> <li>Concept of Intelligent motor control</li> <li>How to improve plant efficiency with intelligent motor managers</li> <li>Motor diagnostics</li> </ol>	<ol> <li>Electrical design engineers from process/Consulting sectors</li> <li>Engineers from Panel building industry</li> <li>Maintenance engineers from process industries</li> </ol>	1	Rs 1500/-
T22	Efficient motor starting solutions and Software tool demonstration	<ol> <li>Effects of different starting methods of motors on loads</li> <li>Motor starting criteria for different applications</li> <li>load specific development of load/torque curves through software tools</li> </ol>	<ol> <li>Design engineers from Pump/Compressor/Crusher/machinery manufacturers</li> <li>Engineers from Panel building industry</li> <li>Maintenance engineers from process industries/engineering industries</li> </ol>	1	Rs 1500/-

ABB Limited Design Institute 88/3, 88/6, Basavanahalli Village 562123, Bangalore North, Karnataka, INDIA email: <u>manjula.ys@in.abb.com</u>, Phone- 080 22949546



Code	Training Module	Subject covered	Who can benefit	Course Period(Days)	Course Fee
T23	Criteria of selecting arc proof and safe LV switchboards	<ol> <li>Electrical safety requirement in LV switchgear</li> <li>Criteria of selection of LV switchboards</li> <li>Safe and reliable LV switchboard design</li> </ol>	<ol> <li>Maintenance engineers from Industry/Hospitality/Hospitals</li> <li>Design engineers</li> <li>Engineers from panel building industry</li> </ol>	1	Rs 1500/-
T24	Application specific selection of contactors.	<ol> <li>Utilization categories of auxiliary and power contactors</li> <li>Selection criteria of contactors based on application</li> <li>Innovations in contactor technology</li> </ol>	<ol> <li>Design engineers</li> <li>Maintenance engineers from Industries</li> <li>Engineers from Panel building industry</li> </ol>	1	Rs 1500/-
T25	Method of starting induction motors	<ol> <li>Understanding starting of induction motors</li> <li>Selection starting method of induction motors</li> <li>Limitations and benefits various methods of starting</li> </ol>	<ol> <li>Design engineers</li> <li>Engineers from panel building industry</li> <li>Engineers from OEM's - Pump/Blowers/Compressors</li> <li>Maintenance engineers</li> </ol>	1	Rs 1500/-
T26	Selection for electronic products in industrial automation	<ol> <li>Sensors selection criteria</li> <li>Automation products in machines to improve efficiency</li> </ol>	<ol> <li>Design engineers OEM machine manufacturers</li> <li>Maintenance engineers from Auto/Paper/Cement/engineering industry</li> </ol>	1	Rs 1500/-

Note	
•	If minimum number participants is less than 7, Schedule will postponed or cancelled
•	transport
•	On registration further details will sent.
•	For registration, Please contact Ms Manjula(Contact details are given below)

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### Training Schedule

Location		Bangalore	Faridabad	Bangalore	Faridabad	Bangalore	Faridabad	Bangalore	Faridabad	Bangalore	Faridabad	
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9				T5	T20		T10	114		T21	T1	
10				T15	T24		112	T18	T5	T20		
11				T17	T23	T8	T16		T15	T24		
12			T4	T6		T10	T2		T17	T23		
13		T12	T3	T7		T11	T13		T6			
14		112	Τ1 /		T26	Т9			Τ7			
15		T16	114		T25	T1				T26		
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Week end Public Holiday