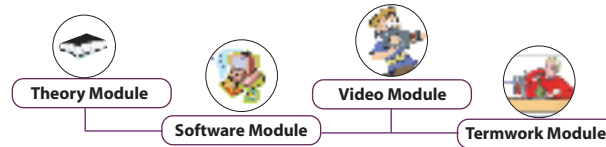


Switch Gear & Protection



System Requirement:- IBM-PC Compatible Min P-III with Window-OS, 128 MB RAM/Multimedia Kit

Theory module

Features : Theory, Figures, Photographs, Animations with Controller, Highlighter Tool, Note Creation Facility, Systematic Page Navigation, Printing Facility.

List of Topics

Protective Relays



Need for Protective Relaying in Power Systems, General Idea of Protective zones, Primary & Back-up Protection, Desirable qualities of Protective Relaying, Classification of Relays, Principle of Working & Characteristics of Induction Type Relays & their Settings.

Static Relays

Characteristics & Basic Components of Static Relays, their Advantages & Disadvantages.



Protection of Alternators



Types of Alternator Faults & Other Abnormal Conditions, Differential, Over-current, Earth-fault Protection, Field Failure Protection.

Protection of Transformers

Types of Transformer Faults, Use of Buchholz Relay, Differential Protection, Connection of C.Ts & Calculations of C.T. Ratios, Need for Percentage Relaying, Protection Against in Rush of Magnetising Currents.



Bus Bar Protection

Differential Types of Bus Bar Arrangements, Simple Schemes for Bus Bar Protection.



Line Protection

Protection with Over Current Relays & with Directional Relays, Principles of Distance Relaying, Choice Between Impedance, Reactance & mho Relays, Wire & Carrier Pilot Protection, Power Line Carrier Communication.

Over Voltage Protection

Causes of Over Voltages, Transient, Switching & Lightning Over Voltages, Surge Absorbers & Arrestors, Necessity & Methods of Earthing the Neutral.

Digital Relaying

Principles & Characteristics of Digital Relaying, Microprocessor Based Over Current Relays.

Principles of Circuit in Protection

Arc Phenomenon, d.c. & a.c. Circuit Breaking, Restriking & Recovery Voltages, Arc Quenching, Current Chopping, Capacitive Current Breaking, Resistance Switching, Auto Reclosing.

Introduction to Switchgear

Different Types of Switchgear, Mode of Classification, Rating of Switchgear.

Low Tension Switchgear

Rewirable & H.R.C. fuses, Construction, Working & Applications of Air Break, Miniature, Moulded Case Circuit Breakers & Contractors.



Circuit Breakers



Construction, Working & Applications of Bulk Oil, Minimum Oil, Air Blast, SF6 & Vacuum Circuit Breakers, Comparison, Advantages & Disadvantages/Limitations of these Circuit Breakers.