

Why ELECTRICAL ENGINEERING @ Mastro Lee...



Syllabus...

1. GENERAL CONCEPT:

- Electrical Generation, Transmission and Distribution
- Different types of equipment and their load as per standard specifications
- Services: Lighting, Power, Fire Alarm,
 Emergency Lighting, etc

2. SYMBOLS AND LEGENDS:

- ▶ Power Services
- ▶ Lighting
- ▶ Fire Detection
- ▶ ELV/ Low Current
- ▶ Earthing and Lighting

3. POWER SERVICES:

- ▶ Cables
- Selection, Conductor, Strands,
 Cores and Insulation
- Armored and Unarmored Cables
- Cable tray raceway, Trunking,
 Conduits and Routing
- ▶ Busbar Details and selection of high rise building
- Switch Gears (Circuit Breakers) Types and Selection

- ► Capacitor bank (Power factor improvement)
- ▶ Single line Diagram (SLD)
- Calculation: Voltage drop calculation and load calculation based on BS 7671

4. LIGHTING:

- Lux level design as per BS 12464
- Escape route lighting as per NFPA 101
- Different types of Lamp like GSL, ETL, CFL, LED, MVL, etc

5. FIRE DETECTION:

- ▶ Fire alarm system as per NFPA 72
- Smoke (Heat Detection)
- ▶ Sounders & Manual call points
- Voice evacuation system for commercial / Residential building

6. ELV / Low Current system: (General Concepts):

- Public Address System
- Close circuit television (CCTV): Types of cameras and circuiting
- Communication: TV, Telephone, intercom and internet networking of cables and types

7. Earthing and Lighting:

- ▶ Lighting Protection
- Lightning protection system design based on BS/IEC 62305
- Types of Earthing According to the requirements
- ► Earthing system design in line with BS 7430

8. DRAWING DETAILS:

- ▶ Lighting Layout
- ▶ Power Layout
- ▶ Emergency Lighting Layout
- ▶ CCTV Layout
- ▶ Public Addressable Layout
- ▶ Fire Alarm system Layout
- ▶ Communication Layout
- Cable Tray Layout
- BUSBAR Layout
- Bus duct riser drawings
- ▶ Single line drawing (SLD)

9. STANDARD & CODES:

 Designing as per Electrical standards: DEWA, ADEWA, ADDC, KHARAMA, etc

