

HIGHER TECHNICAL INSTITUTE
ELECTRICAL ENGINEERING COURSE

DIPLOMA PROJECT

DESIGN OF THE ELECTRICAL SERVICES
OF A MULTISTOREY BUILDING

E. 743

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ABSTRACT

This project deals with the complete electrical installation of a multistorey building which includes:

- (a) Designing the electrical and telephone installation.
- (b) To study the illumination engineering work involved and costing, including labour.

The design was carried out according to:

- (a) The EAC supply i.e. 415/240V, 50 Hz.
- (b) The IEE Regulations (15th edition).
- (c) The CIBS code for designing the lighting load.

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CHAPTER 1: ILLUMINATION

1. Definition of the Terms Used in Illumination
2. Methods of Illumination Calculations
3. Light Sources
4. Spacing of Fittings
5. Calculations Concerning the Illumination Design
6. Results of Illumination Calculations

CHAPTER 2: EARTHING

1. General
2. Definitions of Earthing Terms
3. Earth Loop Impedance
4. Types of System Earthing
5. Earth Leakage Circuit Breakers
6. Bonding

CHAPTER 3: TESTING

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CHAPTER 4: ELECTRICAL DESIGN

1. General
2. Lighting Circuit Design
3. Socket Outlet Design
4. Fixed Appliances
5. Motors Circuit Design
6. Diversity of Total Load Demand, Single Phase Circuit
7. Supply Cable of Single Phase Circuits
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9. Supply Cable of Three Phase Circuit

CHAPTER 5: TELEPHONE INSTALLATION

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2. Definition of Terms Used
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4. Telecommunication Network
5. Installation of Access Cable
6. Installation of Distribution Cases
7. Installation of Telephone Lines
8. Telecommunication Design

CHAPTER 6: COSTING

1. General
2. Costing by Using the Analytical Method

APPENDICES

DRAWINGS