

**HIGHER TECHNICAL INSTITUTE**

**ELECTRICAL ENGINEERING COURSE**

**DIPLOMA PROJECT**

**DESIGN OF THE ELECTRICAL SERVICES  
OF A BLOCK OF FLATS**

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**CHAPTER 1**  
**INTRODUCTION**

This is a project, which deals with the design of the electrical services of a building. This project is divided into different chapters which are contains different subject. In each chapter the calculation of an example is made and the rest results is shown on tables. For the help of the reader to understand the calculation, the project help by sending him back to the Appendices with the phrase (see Appendix... page...).

Chapter 2 deals with the lighting circuits. The numbers of luminaries are state. Also the sizes of the wires and conduits are calculated. The position of the luminaries and the way of connection are showing on the drawings.

Chapter 3 deals with the socket outlet. The sizes of the wires and conduit are calculated in this chapter. The place of each socket outlet is showing on the drawings.

Chapter 4 deals with the fixed appliances of the building. The conduit and wire sizes of the cooker unit, washing machine, bell, water pump, water heater and lift are calculated.

Chapter 5 deals with the air conditioning. The size of the air-conditioning in each room and the wire and conduit sizes are calculated.

Chapter 6 deals with the storage heaters. The size of the unit in each room and the wire and conduit sizes are calculated.

Chapter 7 deals with the telecommunication of the building. The connection of each telephone line in the telephone distribution case is showing. Also the size of the Telephone distribution case and cables are showing.

Chapter 8 deals with the lightning protection of the building. This chapter explain the needed of the lightning protection and show how this can be achieve.

Chapter 9 deals with the fire alarm system. The calculation of the fire alarm system and position of each equipment of it is showing in this chapter.

Chapter 10 deals with the diversity of the building. The sizes of the main fuses and the distribution boards size in each flat are calculated. Also the main cable supply size is calculated.

Chapter 11 deals with the costing of the installation. The calculation of the material and labour cost is providing in this chapter.

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