

# Contents

## **PART I: Scientific texts and Exercises**

|   |     |
|---|-----|
| 1. Introduction to Electrical Engineering ..... | 7   |
| 2. Different Forms of Energy .....              | 9   |
| 3. Electrical Energy .....                      | 21  |
| 4. Electricity .....                            | 27  |
| 5. Methods of Generating Electricity.....       | 37  |
| 6. Electromagnetism .....                       | 49  |
| 7. Waves and Particles.....                     | 57  |
| 8. Electromagnetic Waves.....                   | 63  |
| 9. Semiconductors.....                          | 71  |
| 10. Integrated Circuits.....                    | 79  |
| 11. Batteries.....                              | 85  |
| 12. Nuclear Power .....                         | 91  |
| 13. Renewable Resources.....                    | 97  |
| 14. Telecommunications.....                     | 109 |
| 15. Robotics & Artificial Intelligence.....     | 125 |
| 16. Computer History.....                       | 133 |
| 17. Antikythera Mechanism .....                 | 139 |
| 18. Computer Generations.....                   | 145 |
| 19. Software.....                               | 153 |
| 20. Operating Systems .....                     | 159 |
| 21. Programming Languages .....                 | 165 |
| 22. Networks .....                              | 173 |
| 23. Internet.....                               | 181 |
| 24. Information Society.....                    | 187 |

**PART II: Useful English for Electrical and Computer Engineering  
Students and Professionals**

- Personal Data Resumes or Curriculum Vitae..... 195
- Tips of Grammar & Structure in Technical English..... 207
- Miscellaneous Topics ..... 213
- Writing Technical Reports ..... 221

**PART III: English - Greek Vocabulary.....231**