THE ELECTRICAL PRINCIPLES OF TELECOMMUNICATIONS

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Preface

The book is intended to cater for the requirements of more than one class of reader. It is of primary importance to students who are preparing for the Principles B and C examinations of the CGLI No. 271 Course. Secondly, there are those technicians who, although employed in the field of telecommunications, need a book to which they can refer in an attempt to keep abreast of a developing subject. Thirdly, the authors have in mind all those actively engaged in the teaching of electrical principles with a light current bias, who require a supply of examination-type examples in their everyday work. This diversity of readership has led to a somewhat unusual layout of the complete text in a single volume. Care has been taken to offer guidance to the student by printing B or C at the beginning and end of topics that are appropriate to a particular syllabus. This should not interfere with continuity in the book for other readers or in any way detract from its overall value. Instead it should be regarded as a means of gaining two advantages:

1. It has allowed the authors scope to explain certain topics without the restriction of artificial boundaries created by the need for two syllabuses.
2. It avoids the repetition that would inevitably arise from publishing two books.

When it is felt necessary to continue beyond the Principles C requirements, the opportunity has been taken of pursuing some topics a stage further in order to bring them to a more logical conclusion. The section of work on field effect transistors to the exclusion of valves was considered to be desirable.

As far as possible, the standard of mathematics in the various proofs and derivations has been kept within that taught in the third and fourth years of the CGLI No. 271 Course. The circuit diagrams are in accordance with B.S. 3939 and SI units have been used throughout. Altogether there are 216 examples included in the text, of which 45 per cent have worked solutions.

The authors would like to place on record their grateful appreciation for the valuable contribution made by the City and Guilds of London Institute in allowing past examinations questions to be used. It ought to be stated

that the authors accept responsibility for the solutions and every effort has been made to ensure their accuracy. Finally, the three typists — Mrs J. Lowe, Mrs M. Miller and Miss K. Gibbons — deserve a special word of commendation for the cheerful and efficient way in which they applied themselves to the task of producing the script.

Wigan and District Mining and Technical College

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D.N.

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