Australian Post Office

INTERNAL PLANT CORRESPONDENCE COURSE

INFORMATION SHEET 1

1. This group of lessons consists of four mathematical lessons, mostly revising topics which will be familiar to you from past studies, and the first lessons in Electronics and Circuit Theory.

2. The lessons require the material listed below and it should be checked for completeness before proceeding. Each of the sections including the lessons themsleves, should therefore finish with the word "END".

3. Check now to ensure that you have received all of the items listed:-

    (a) Information sheet for the lessons.

    (b) Lessons
        1M Indices
        2M Transposition of Formulae
        3M Logarithms
        4M Graphs
        1C Ohm's Law
        2C Equivalent Circuits and Voltage Dividers
        5E Diode Characteristics
    (c) Assignment Test Questions.

    (d) Assignment Test Questions Answer Book.

    (e) Mathematical Texts.
        Basic Mathematics for Technical College Students (Lunt)
        Turner's four figure Mathematics Tables.

    (f) Electronic Text.
        Electronic Circuit Analysis (Wade)

    (g) Technical Publications.
        ETP 0277 The Slide Rule.
        ETP 0035 Semiconductor Devices (1)
        ETP 0283 Semiconductor Devices (2)

R.T. 75/0303

Mathematics is a very important tool in helping to solve engineering problems. In this course it is especially important since it forms the basis for many of the later and more advanced subjects of the course.

The importance of completing and gaining a thorough understanding of the principles involved therefore cannot be over emphasised. It also goes without stating that if problems are encountered you should not hesitate to seek assistance.

Although large, the early mathematics lessons should be found easy going.

Their bulkiness can be attributed to the fact that they attempt to explain new concepts step by step as thoroughly as possible.

Two distinct formats of lesson have been constructed these being the "programmed" type and "conventional" type. The former need to be tackled as per the "special instruction sheet" preceeding these lessons.

The latter more conventional type lessons, on the other hand, can be approached as follows:

(a) Go through any READING of BMTCS as indicated in the course notes, not in great detail, but just to gain an appreciation of the material covered. Study the balance of the lesson in the same manner.

(b) Study the "Comment" sections (if any) in the course notes, these being related to the READING.

(c) Systematically work through the lesson again, this time in detail.

(d) Solve the associated LESSON TEST PROBLEMS. After you have attempted these problems, compare your solutions with the model answer which follow the text of the lessons.

(e) Solve the ASSIGNMENT TEST QUESTIONS which follow the final lesson. Do these questions in the ANSWER BOOK and post it for correction not later than the date specified.

Explanation of terminology used in the Mathematics Textbook.

As mentioned earlier, the reference book for the mathematics covered in the course is Basic Mathematics for Technical College Students by W.T. Lunt. It is referred to throughout the lessons by the abbreviation BMTCS.

Clarification of some of the notation used in this books is as follows:

BMTCS Notation	Meaning, or common Alternative
a.b	a × b
a/b	a ÷ b
≠	not equal to
$\text{Log}_e X$	natural logarithm
LnX	Naperian Logarithm
√a/b	$\frac{\sqrt{a}}{b}$
√(a/b)	$\frac{\sqrt{a}}{\sqrt{b}}$ or $\frac{a}{b}$
√(a)b	√a × b
√(ab)	√ab

END