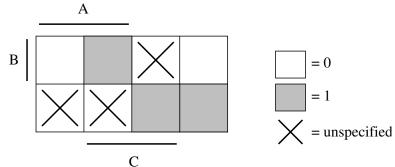# 1995 Paper 2 Question 21

Digital Electronics and Computer Design

Explain the terms "minterm" and "prime implicant".

A number of Boolean functions conform to the map shown below:

Exhibit maps and minimum "sum of product" expressions for the following particular functions:

(a) $F1$, being a function of two variables;

(b) $F2$, having four minterms;

(c) $F3$, having two prime implicants;

(d) $F4$, having a prime implicant that can not appear in the minimum "sum of products" representation.

[20 marks]