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Information & Communication Technology

Grade - 10

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ICT Unit 4

(1)

(a). Let's fill in the table below related to the basic logic gates

Basic Logic Gate	Diagram	Algebraic expression
a) .....		$Q = A \cdot B$
OR Gate	b) .....	$Q = A + B$
NOT Gate		c) .....

(b). The main door or back door can be used to leave or enter the house. The relevant circuit is shown below.

- (i). What gate it represents?
- (ii). Fill in the blanks of the truth table for that gate.

A	B	.....
0	0	.....
0	1	.....
1	0	.....
1	1	.....

(2). Create logical circuits for the following Boolean expressions and draw the truth tables.

- I. (i).  $A+B \cdot B$
- (ii).  $A+(A+B)$
- (iii).  $(A \cdot B)+A'$