

Revision Sheet

IGCSE Computer Science · Unit 10 Boolean logic

6 vocabulary items · 27 marks of exam questions (5 questions)

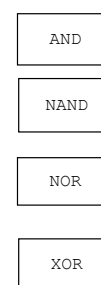
Part 1 · Vocabulary review answer key. Section A wants the exact English spelling.

Question	Answer	Marks
1	truth table	1
2	NOT gate	1
3	AND gate	1
4	OR gate	1
5	logic expression	1
6	logic circuit	1

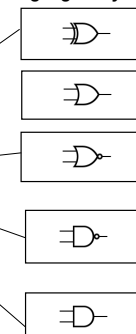
7

One mark for each correct line

Logic gate



Logic gate symbol



8

4 marks for 8 correct outputs
3 marks for 6/7 correct outputs
2 marks for 4/5 correct outputs
1 mark for 2/3 correct outputs

A	T	H	W
0	0	0	0
0	0	1	0
0	1	0	1
0	1	1	0
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

9

4 marks for 8 correct outputs
 3 marks for 6/7 correct outputs
 2 marks for 4/5 correct outputs
 1 mark for 2/3 correct outputs

A	B	C	X
0	0	0	0
0	0	1	0
0	1	0	0
0	1	1	0
1	0	0	0
1	0	1	1
1	1	0	0
1	1	1	0

10(a)

X = (A AND B) // A AND B AND NOT C

1 mark

1 mark

1 mark

X = (A AND B) AND NOT C

10(b)

Four marks for 8 correct outputs
 Three marks for 6/7 correct outputs
 Two marks for 4/5 correct outputs
 One mark for 2/3 correct outputs

A	B	C	X
0	0	0	0
0	0	1	0
0	1	0	0
0	1	1	0
1	0	0	0
1	0	1	0
1	1	0	1
1	1	1	0

11(a)

One mark for the logic gate and one mark for the truth table

XOR logic gate symbol:



Truth table:

A	B	X
0	0	0
0	1	1
1	0	1
1	1	0

11(b)(i)

One mark per mark point

MP1 A AND

MP2 (NOT B OR NOT C) // NOT(B AND C) // (B NAND C)

Or

One mark per mark point

MP3 A AND NOT B

MP4 OR A AND NOT C

Example answers

(X =) A AND (NOT B OR NOT C) // A AND NOT (B AND C) // A AND (B NAND C)

(X =) A AND NOT B OR A AND NOT C

11(b)(ii)

Four marks for eight correct outputs**Three** marks for six or seven correct outputs**Two** marks for four or five correct outputs**One** mark for two or three correct outputs

A	B	C	X
0	0	0	0
0	0	1	0
0	1	0	0
0	1	1	0
1	0	0	1
1	0	1	1
1	1	0	1
1	1	1	0