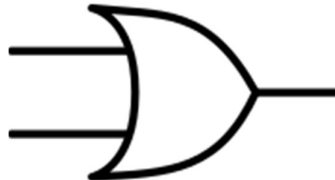


Q	Answer	Mark	Guidance																																																						
1	<table><tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>Q</td></tr><tr><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td></tr><tr><td>0</td><td>0</td><td>1</td><td>0</td><td>0</td><td>1</td></tr><tr><td>0</td><td>1</td><td>0</td><td>0</td><td>0</td><td>1</td></tr><tr><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td><td>0</td></tr><tr><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td></tr><tr><td>1</td><td>0</td><td>1</td><td>0</td><td>0</td><td>1</td></tr><tr><td>1</td><td>1</td><td>0</td><td>0</td><td>0</td><td>1</td></tr><tr><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>0</td></tr></table> <p>1 mark per correct column</p>	A	B	C	D	E	Q	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	0	0	1	0	1	1	1	1	0	1	0	0	0	0	1	1	0	1	0	0	1	1	1	0	0	0	1	1	1	1	1	1	0	3	
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2	<p><math>Q = \text{NOT} (C \text{ AND } (A \text{ AND } B))</math></p> <p>1 mark for</p> <ul style="list-style-type: none"><li>• C AND (A AND B)</li><li>• Using the NOT before the C AND (A AND B)</li></ul>	2																																																							
3	<p>1 mark for</p> <ul style="list-style-type: none"><li>• Correctly identify the truth table as an OR logic gate</li><li>• For drawing an OR gate</li></ul>	2	 <p><a href="#">This Photo</a> by Unknown Author is licensed under <a href="#">CC BY-SA</a></p>																																																						

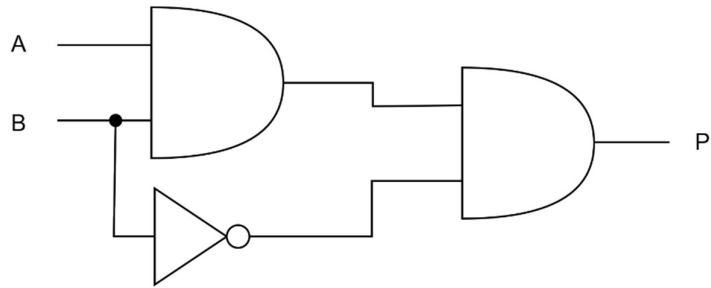
4	<table><tr><td></td><td></td><td></td><td>D</td><td>E</td><td>Q</td></tr><tr><td></td><td></td><td></td><td>0</td><td>1</td><td>1</td></tr><tr><td></td><td></td><td></td><td>0</td><td>0</td><td>0</td></tr><tr><td></td><td></td><td></td><td>0</td><td>1</td><td>1</td></tr><tr><td></td><td></td><td></td><td>1</td><td>0</td><td>1</td></tr><tr><td></td><td></td><td></td><td>0</td><td>1</td><td>1</td></tr><tr><td></td><td></td><td></td><td>0</td><td>0</td><td>0</td></tr><tr><td></td><td></td><td></td><td>0</td><td>1</td><td>1</td></tr><tr><td></td><td></td><td></td><td>1</td><td>0</td><td>1</td></tr></table> <p>1 mark for each correct column</p>				D	E	Q				0	1	1				0	0	0				0	1	1				1	0	1				0	1	1				0	0	0				0	1	1				1	0	1	3	
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6	<table><tr><th>A</th><th>B</th><th>C</th><th>D</th><th>E</th><th>F</th><th>G</th><th>Q</th></tr><tr><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>0</td><td>0</td><td>0</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>0</td><td>0</td><td>1</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>1</td><td>0</td><td>0</td></tr><tr><td>0</td><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>0</td><td>1</td><td>1</td><td>1</td><td>0</td><td>1</td><td>0</td><td>0</td></tr><tr><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>1</td><td>0</td><td>0</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>1</td><td>0</td><td>1</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>1</td><td>0</td><td>1</td><td>1</td><td>0</td><td>1</td><td>0</td><td>0</td></tr><tr><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>0</td><td>1</td><td>1</td></tr><tr><td>1</td><td>1</td><td>0</td><td>1</td><td>1</td><td>0</td><td>1</td><td>1</td></tr><tr><td>1</td><td>1</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>1</td></tr><tr><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>0</td><td>1</td></tr></table> <p>1 mark for each correct column</p>	A	B	C	D	E	F	G	Q	0	0	0	0	0	0	1	1	0	0	0	1	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	1	0	1	0	0	0	1	0	0	0	0	1	1	0	1	0	1	0	0	1	1	0	1	1	0	0	0	1	1	0	1	1	1	0	1	0	0	1	0	0	0	0	0	1	1	1	0	0	1	0	0	1	1	1	0	1	0	0	0	1	1	1	0	1	1	0	1	0	0	1	1	0	0	1	0	1	1	1	1	0	1	1	0	1	1	1	1	1	0	1	0	1	1	1	1	1	1	1	1	0	1	4	
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8



2

1 mark for

- An AND Gate which takes as an input the result of A AND B
- ... AND the result of NOT B

9

A	B	A AND B	NOT B	P
0	0	0	1	0
0	1	0	0	0
1	0	0	1	0
1	1	1	0	0

3

1 mark for each correct column

