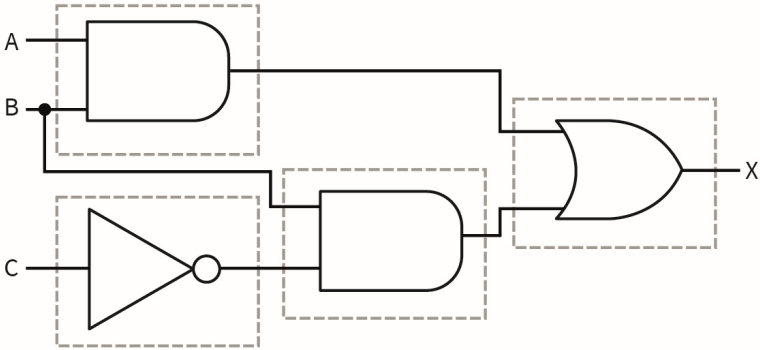


Oxford Revise | OCR Computer Science | Answers

Chapter 35 Logic diagrams

Question	Answer	Extra information	Marks	AO / Specification reference
1	 <p>The diagram shows a logic circuit with three inputs: A, B, and C. Input A and B are connected to an AND gate. The output of this AND gate is connected to one input of an OR gate, and input B is also connected to the other input of the OR gate. The output of the OR gate is connected to one input of a second AND gate, and input C is connected to the other input of this second AND gate. The final output of the second AND gate is labeled X. Dashed boxes highlight the three logic gates: the first AND gate, the OR gate, and the second AND gate.</p>	1 mark for each correct logic gate in the correct box, with the correct number of inputs and outputs, up to 4 marks.	1 1 1 1	AO2 2.4.1

Question	Answer	Extra information	Marks	AO / Specification reference																																																																						
2	<table border="1"> <thead> <tr> <th colspan="3">Inputs</th> <th colspan="3">Working</th> <th>Output</th> </tr> <tr> <th>P</th> <th>Q</th> <th>R</th> <th>P OR Q</th> <th>Q OR R</th> <th>(P OR Q) AND (Q OR R)</th> <th>Z</th> </tr> </thead> <tbody> <tr> <td>0</td> <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>1</td> <td>0</td> <td>1</td> </tr> <tr> <td>0</td> <td>1</td> <td>0</td> <td>1</td> <td>1</td> <td>1</td> <td>0</td> </tr> <tr> <td>0</td> <td>1</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>1</td> <td>0</td> <td>0</td> <td>1</td> </tr> <tr> <td>1</td> <td>0</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>0</td> </tr> <tr> <td>1</td> <td>1</td> <td>0</td> <td>1</td> <td>1</td> <td>1</td> <td>0</td> </tr> <tr> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>0</td> </tr> </tbody> </table>	Inputs			Working			Output	P	Q	R	P OR Q	Q OR R	(P OR Q) AND (Q OR R)	Z	0	0	0	0	0	0	1	0	0	1	0	1	0	1	0	1	0	1	1	1	0	0	1	1	1	1	1	0	1	0	0	1	0	0	1	1	0	1	1	1	1	0	1	1	0	1	1	1	0	1	1	1	1	1	1	0	<p>Up to 5 marks in total:</p> <ul style="list-style-type: none"> • 1 mark for a truth table with three inputs, one output, and eight rows • 1 mark for every two correct corresponding input and output rows, up to 4 marks. <p>Note: Working is shown for reference only as it was not required in the question.</p>	<p>1 1 1 1 1</p>	<p>AO2 2.4.1</p>
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