

Revision Sheet

IGCSE Computer Science · Unit 7 Algorithm design and problem-solving

13 vocabulary items · 29 marks of exam questions (14 questions)

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

Question	Answer	Marks
1	program development life cycle	1
2	analysis	1
3	design	1
4	coding	1
5	testing	1
6	test data	1
7	algorithm	1
8	validation	1
9	range check	1
10	length check	1
11	type check	1
12	verification	1
13	trace table	1

14	D
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15	C
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16	D
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17	C
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18	D
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19	C
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20	<p>One mark for each correct line</p> <table> <tr> <th>Logic gate</th><th>Standard symbol</th></tr> <tr> <td>AND</td><td></td></tr> <tr> <td>OR</td><td></td></tr> <tr> <td>NAND</td><td></td></tr> <tr> <td>NOT</td><td></td></tr> <tr> <td></td><td></td></tr> <tr> <td></td><td></td></tr> </table>	Logic gate	Standard symbol	AND		OR		NAND		NOT					
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NOT															
															
															

21	<p>One mark for naming the type of check and one mark for an expansion (max two)</p> <ul style="list-style-type: none"> • Visual check • ... looking at the data that has been entered and either confirming it is correct or showing / correcting errors. <p>OR</p> <ul style="list-style-type: none"> • Double entry check // Data entered twice • ... data is entered twice and the two sets of data are compared (by the computer). If they don't match, an error has been input, so re-entry is requested.
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22	<p>One mark for each correct line, max three</p> <table> <tr> <th>Component part</th><th>Example statements</th></tr> <tr> <td>process</td><td>the height of the fence the length of the fence</td></tr> <tr> <td>output</td><td>The amount of paint required is 40 square metres.</td></tr> <tr> <td>input</td><td>the colour of the paint</td></tr> <tr> <td></td><td>The area of fence is calculated as 40 square metres.</td></tr> </table>	Component part	Example statements	process	the height of the fence the length of the fence	output	The amount of paint required is 40 square metres.	input	the colour of the paint		The area of fence is calculated as 40 square metres.
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23	<p>One mark for each point</p> <ul style="list-style-type: none"> analysis design testing
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24	<p>One mark for each correct answer max three</p> <p>MP1 abstraction</p> <p>MP2 decomposition</p> <p>MP3 identification of problem</p> <p>MP4 identification of requirements // outline of success criteria</p>
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25	<p>One mark for each point max two.</p> <ul style="list-style-type: none"> check that the program works as expected check for logic/runtime errors check that the program rejects any invalid data that is input check that the program only accepts reasonable data <p>One mark for example</p> <p>Normal // erroneous // abnormal // extreme // boundary</p>
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26	<p>One mark per correct piece of test data,</p> <p>Normal test data: -50 (any integer value between 0 and -100, inclusive)</p> <p>Abnormal test data: 50 (any value outside the range 0 and -100, inclusive, or any non-numeric input and non-integers)</p> <p>Extreme test data: 0 // -100</p> <p>Boundary test data: 1 // 0 // -100 // -101</p>
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One mark for each correct line