AQA Computer Science A-Level

4.3.2 Tree-traversal

Past Paper Mark Schemes

June 2017 Paper 1

<table>
<tr><td>04</td><td>1</td><td>Mark is for AO1 (knowledge)

A subroutine that calls itself;</td><td>1</td></tr>
<tr><td>04</td><td>2</td><td>Mark is for AO1 (understanding)

When target equals node // (When target does not equal node and) node is a leaf //
<code>node = target;</code></td><td>1</td></tr>
<tr><td>04</td><td>3</td><td>Marks are for AO2 (apply)

<table><tr><th>Function Call</th><th>Output</th></tr><tr><td><code>TreeSearch(Olivia, Norbert)</code></td><td>(Visited) Norbert;</td></tr><tr><td><code>TreeSearch(Olivia, Phil);</code></td><td>(Visited) Phil;</td></tr><tr><td></td><td></td></tr></table>
MAX 2 if any errors eg additional outputs / function calls after output of Phil

I. minor spelling and punctuation errors</td><td>3</td></tr>
</table>

June 2013 Comp 3

4	(d)		One mark for each area outlined with a dark rectangle. Lines that are not outlined can be missed out. Alternative 1 | Pos	Output
---	---
1	
2	4
1	
3	
4	9
3	
5	6
3	*
1	+	 Alternative 2 	Pos	Output
---	---
1	4
2	9
1	6
3	*
4	+
3	
5	
3	
1		 Mark against whichever alternative gives the highest mark. **Stop marking as soon as incorrect output is given.**	4

4	**(e)**		Post-order; **A.** Depth-first **A.** Depth-first search as BOD **TO.** Depth-first pre/in-order	**1**

4	**(f)**		(4 + 9 * 6 in) Reverse Polish (Notation) // Postfix (Notation) // RPN;	**1**