AQA Computer Science A-Level 4.2.5 Trees

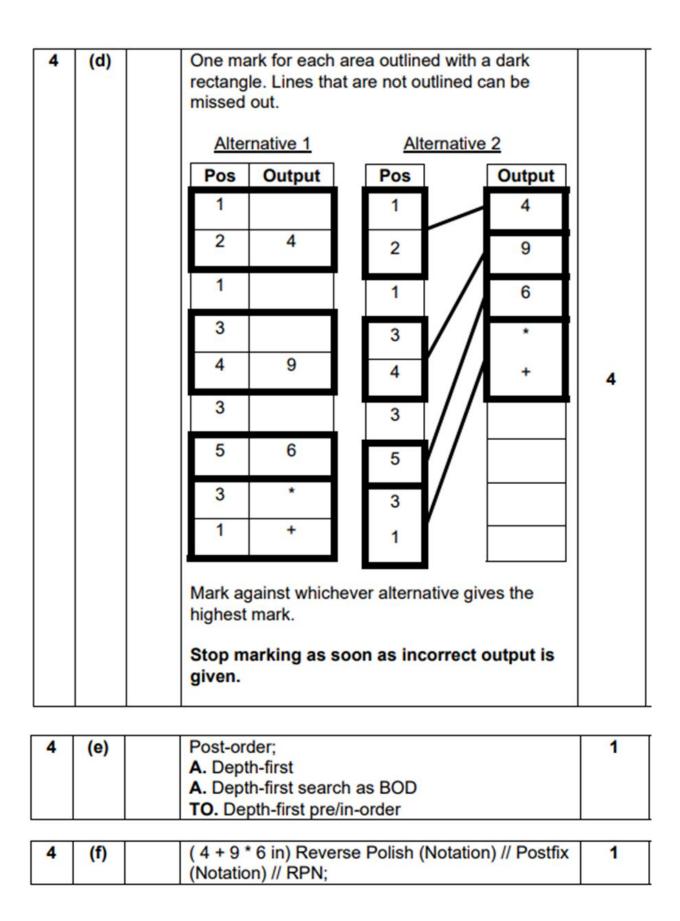
Past Paper Mark Scheme

June 2012 Comp 3 Mark Scheme

10	(a)	Connected // There is a path between each pair of vertices; Undirected // No direction is associated with each edge; Has no cycles // No (simple) circuits // No closed chains // No closed paths in which all the edges are different and all the intermediate vertices are different // No route from a vertex back to itself that doesn't use an edge more than once or visit an intermediate vertex more than once; A no loops MAX 1 Alternative definitions: A simple cycle is formed if any edge is added to graph; Any two vertices can be connected by a unique simple path;	1
10	(b)	No route from entrance to exit / through maze; Maze contains a loop/circuit; A more than one route through maze; Part of the maze is inaccessible / enclosed; R Responses that clearly relate to a graph rather than the maze MAX 1	1

June 2013 Comp 3 Mark Scheme

4	(a)	+; 4, 9, 6; (in any order)	2
4	(b)	A: Store the data/value (in the vertices/nodes); A. holds the expression B: Left pointer // points to the left child / left sub tree; C: Right pointer // points to the right child / right sub tree; A "indicates", "index" or other synonym for "points" / "pointer" R. Stores left/right subtree	3
4	(c)	The node has no left child / sub tree; A there is nothing to the left A this is a null pointer	1



Specimen Paper 1 Mark Scheme

03	1	Mark is for AO1 (understanding)	1
		It contains a cycle / cycles;	