Course: Data Structures (CSE CS203A, 114-1)

Quiz V: Tree/Heap/Graph

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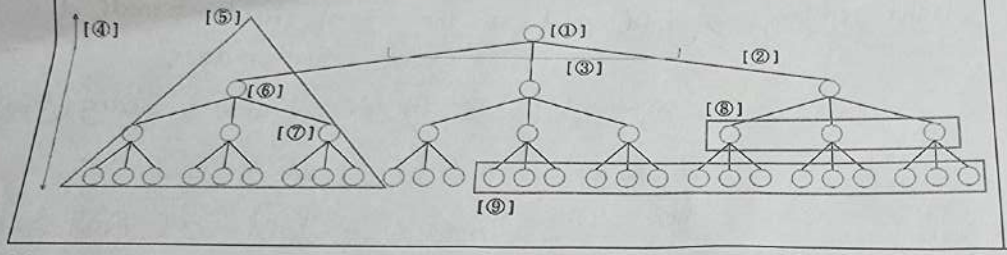
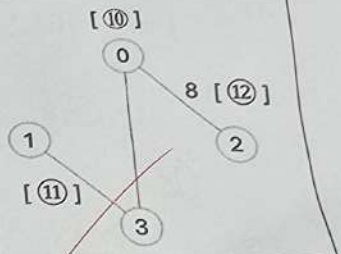
Q1. (60 pts, 5pts each)

Graph & Tree Terminology.

完成圖與樹的術語表

Tree	Graph
	

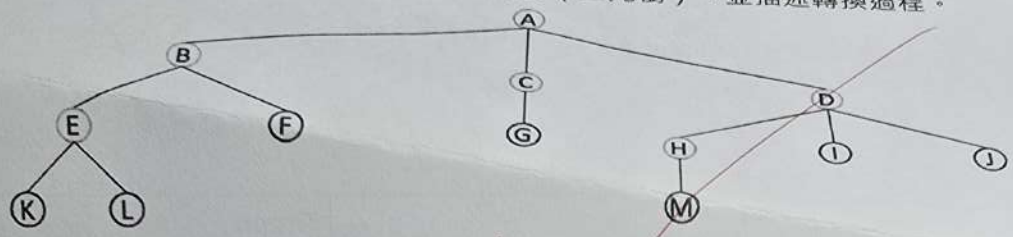
A1:

①	root	②	edge 邊
③	degree	④	hight
⑤	subtree	⑥	parent (⑦'s)
⑦	child (⑥'s)	⑧	sibling
⑨	leaf (s)	⑩	vertex 點
⑪	edge 邊	⑫	weight

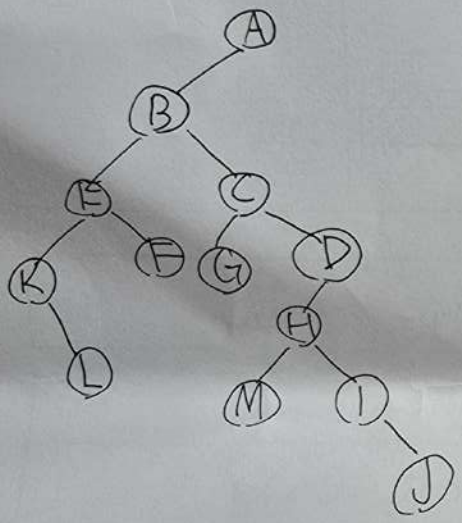
Q2. (40 pts)

Convert the tree in the figure below into a degree-two (binary) tree, and describe the conversion process.

將下圖中的樹轉換成度(分支)為二的樹（二元樹），並描述轉換過程。



A2: left child, right sibling ⇒ left child is the orignal node's left child



right child is the orignal node's right side sibling

for example. B's left child is E (child)

B's right child is C (sibling)

than; C's left child is G (child)

C's right child is D (sibling)

for node E, E's left child is K (child)

E's right child is F (sibling)

If there is no sibling or left child, just don't draw.

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