

Student ID:

1131417

Student Name:

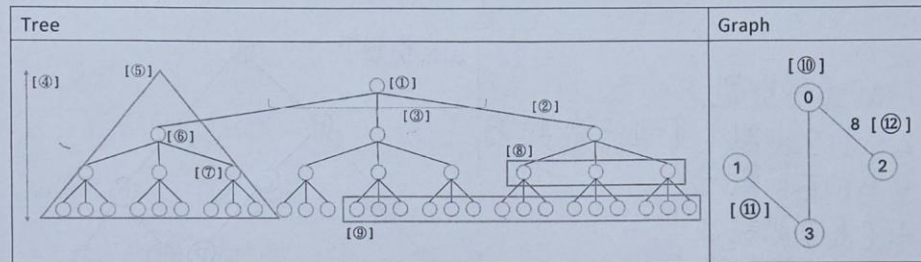
魏允鴻

55

Q1. (60 pts, 5pts each)

Graph & Tree Terminology.

完成圖與樹的術語表



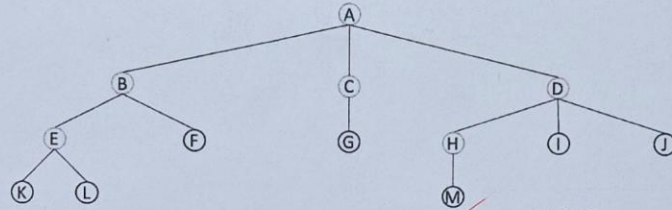
A1:

①	root	②	edge
③	廣度	④	深度
⑤	left subtree	⑥	parent
⑦	child	⑧	sibling
⑨	leaf	⑩	vertex (頂點)
⑪	edge	⑫	weight (權重)

Q2. (40 pts)

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

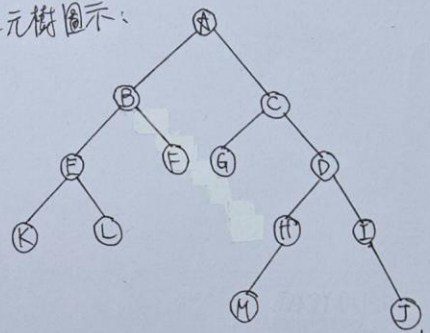
將下圖中的樹轉換成度(分支)為二的樹(二元樹)，並描述轉換過程。



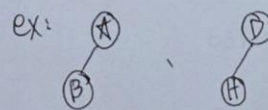
A2:

1. A仍是根節點
2. A的左節點是第一個子節點B
3. B的右節點是C
4. C的右節點是D
5. B的左節點是E
6. E的右節點是F
7. E的左節點是K
8. K的右節點是L
- 9.

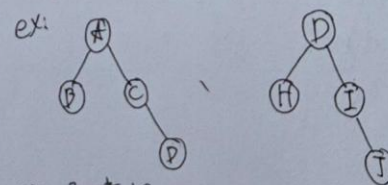
二元樹圖示:



step1: 只留第一個子節點



step2: 同層 sibling 用右指標連結



step3: 畫圖