Course: Data Structures (CSE CS203A, 114-1)
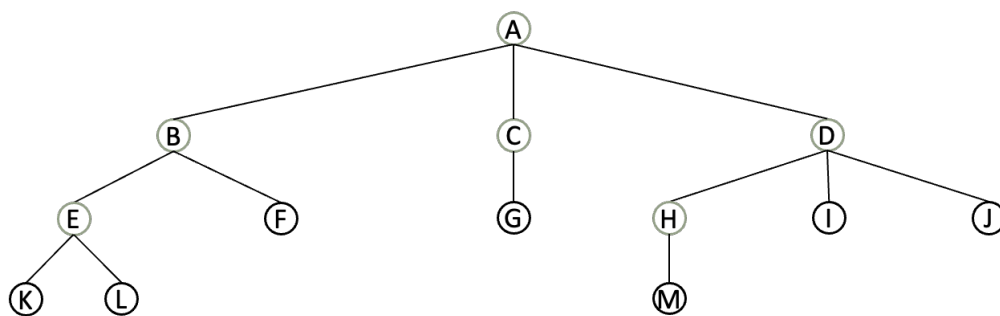## Quiz V: Tree/Heap/Graph
December 16, 2025, 16:30~17:00

Student ID: Student Name:

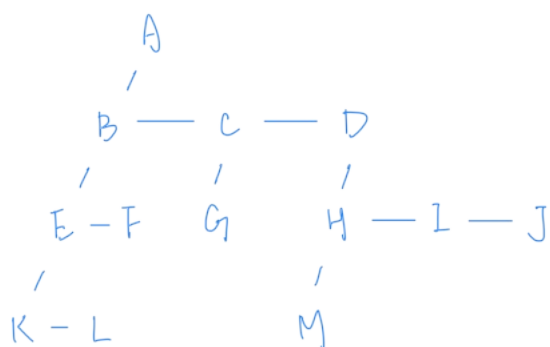Q1. (60 pts, 5pts each) Complete the terminology.

Tree	Graph
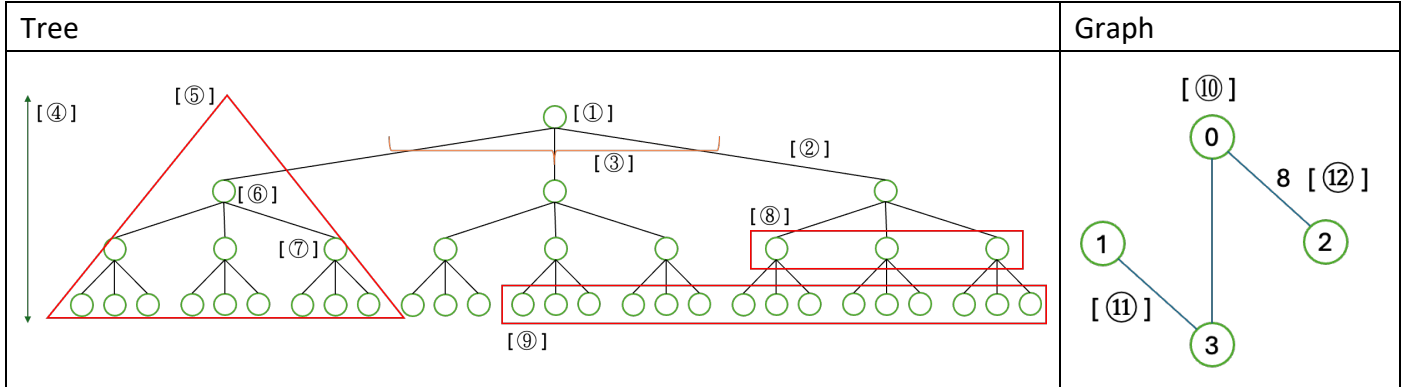
A1:

①	root	②	edge
③	degree	④	depth
⑤	subtree	⑥	parent
⑦	child	⑧	siblings
⑨	leaf	⑩	node
⑪	edge	⑫	edge with label

Q2. (40 pts) Convert the tree in the figure below into a degree-two (binary) tree, and describe the conversion process.
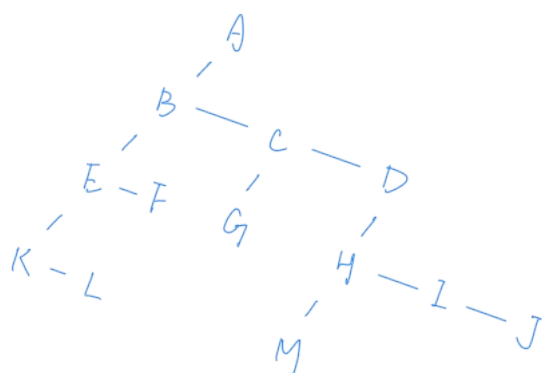

A2:

1. 左兒子．右兄弟

```
      A
     /
    B — C — D
   /    /    /
  E—F  G    H—I—J
 /          /
K—L         M
```

2. 轉 45°

```
            A
           /
         B
        /   \
       /     C
     E—F    / \
    /      G    D
   K        \    /
    L        M  H—I—J
```

3. Binary Tree

```
          A
         /
        B
       / \
      E   C
     / \  / \
    K  F G   D
    |      /
    L     H
         / \
        M   I
            |
            J
```