

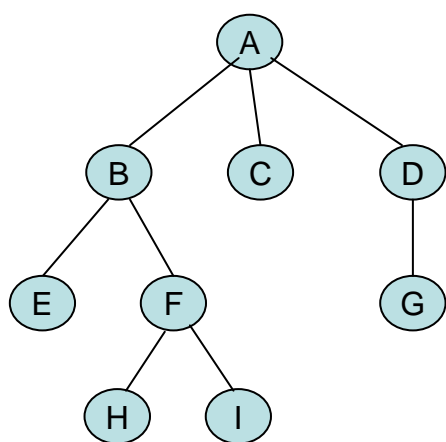
慈濟大學 105 學年度 碩博士班、博士學位學程暨碩士在職專班 招生考試命題紙

科目：計算機概論

共1頁

請注意：不得攜帶計算工具或參考書。

1. (20%) Give the algorithm for Bubble sort, and analyze its average time complexity.
2. (20%) (a) Represent the following tree by a binary tree representation.



- (b) Assume the above binary tree is represented by a one-dimensional array (without pointer, and the array index is started from 0). Show the array representation and give the array index for nodes C, E, G and H.
3. (20%) Explain the protocols defined in TCP/IP. Compare the TCP/IP layers with OSI network model. Discuss the advantage and disadvantage of having one application layer in the TCP/IP protocol suite instead of three layers (i.e. session, presentation, and application) as in the OSI model.
4. (20%) Explain the functionality of the main components in von Neuman model.
5. (20%) Explain the following terms:
 - (a) machine cycle in CPU.
 - (b) network topology.
 - (c) paged memory management.
 - (d) Round-robin approach in CPU process scheduling.