

國立臺灣科技大學

九十二學年度博士班招生考試試題

系所組別：資訊工程系博士班

科目：計算機系統

總分100分

1. Give the essential properties of the following types of operating systems: (20%)
 - a). Multiprogramming
 - b). Time sharing
 - c). Real time
 - d). Distributed
 - e). Multithread
2. Please give your opinion on the developing trend of operating systems. Also give your explanation. (20%)
3. Give and describe two architecture techniques used in multiprocessor computers. (20%)
4. Give a method to multiply two $n \times n$ matrices within the time complexity $O(n^{2.81})$. (20%)
5. Suppose you are assigned to design a program to solve a problem (e.g. traveling salesman problem), which has been shown to be NP-complete. What would you do in practice to solve this problem? In other words, in algorithm design theory, what design methodology you can use to solve an NP-complete problem? (20%)

