國立臺北科技大學

九十四學年度自動化科技研究所入學考試

計算機概論試題

填准考證號碼　　第一頁　共一頁

注意事項：

1. 本試題共六題，配分共 100 分。
2. 請按順序標明題號作答，不必抄題。
3. 全部答案均須答在答案卷之答案欄內，否則不予計分。

1. For each of the following, write a SINGLE statement that performs the indicated task. Assume that floating-point variables number1 and number2 have been declared, and that number1 has been initialized to 5.6. (4% each, 20%)
   a) Declare a variable fPtr to be a pointer to an object of type float.
   b) Assign the address of variable number1 to pointer variable fPtr.
   c) Print the value of the object pointed to by fPtr.
   d) Assign the value of the object pointed to by fPtr to variable number2.
   e) Print the address of number1. Use the %p conversion specifier.

2. State whether each of the following is true or false. If false, explain why. (4% each, 20%)
   a) Structure may contain only one data type.
   b) Two unions can be compared to determine if they are equal.
   c) The tag name of a structure is optional.
   d) The member of different structures must have unique name.
   e) The keyword typedef is used to define new data type

3. State the conditions for a dead lock to occur. (15%)

4. What operations are consisted in a semaphore mechanism? Explain the purposes of these operations. (15%)

5. In paged virtual-memory system, when will a page fault occur? Explain the behavior of thrashing. (15%)

6. Explain why 1-persistent CSMA has lower throughput than p-persistent CSMA. (15%)