

# 國立臺北科技大學 102 學年度碩士班招生考試

系所組別：4130 工業工程與管理系碩士班丙組

## 第二節 計算機概論 試題

第一頁 共一頁

### 注意事項：

1. 本試題共六題，配分共 100 分。
2. 請標明大題、子題編號作答，不必抄題。
3. 全部答案均須在答案卷之答案欄內作答，否則不予計分。

1. Write a program (C, Java, or C++) that print out the integer values of a, b, and c in descending order. 20%
2. The greatest common divisor (GCD) in its recursive form is defined by
$$\text{gcd}(m, n) = \begin{cases} m & n = 0 \\ \text{gcd}(n, m \bmod n) & n > 0 \end{cases}$$
Write a computer program to implement the GCD function. 20%
3. Please give a brief description about the web page language HTML (Hyper Text Markup Language) and CSS (Cascading Style Sheets). 18%
4. Please compute the expression 01010110 (binary) plus 01000111 (binary), and give the results in decimal form. 12%
5. Let the arithmetic expression be  $A - (B + C) * D / E$ . 16%
  - (1) Please draw a binary tree to represent the arithmetic expression given above.
  - (2) Please list all the internal nodes and terminal nodes.
  - (3) What is the height of the tree?
  - (4) List the post-order traversal of the binary tree obtained in (1).
6. What is the main advantage of IPv6 over IPv4? Please give differences in capabilities between IPv4 and IPv6. 14%