NTIT 國立臺中技術學院　系所：多媒體設計系碩士班科技組　准考證號碼：

100 學年度碩士班考試入學暨碩士在職專班試題　科目：計算機概論

注意事項：

1.答案卷書寫題號依序作答，不必抄題。
2.答案卷不可書寫任何可辨別個人姓名或特殊標記，違反者以零分計算。
3.請於試題紙上填寫准考證號，繳卷時「試題」、「答案卷」一併繳回。

一、選擇題(15%)

1. In computer programming, a _____ (semantic error) is a bug in a program that causes it to operate incorrectly, but not to terminate abnormally.
a. Logic error　b. Run-time error　c. Syntax error　d. One-time error

2. Augmented reality (AR) is a term _____.
A) that applies to computer-simulated environments that can simulate physical presence in places in the real world, as well as in imaginary worlds.
B) that augments users capability to talk to other people over the Internet
C) that functions much like an answering machine, allowing callers to leave a voice message for the called party
D) for a live direct or an indirect view of a physical, real-world environment whose elements are augmented by computer-generated sensory input, such as sound or graphics.

3. _____ is the appearance of motion created by displaying a series of still images in sequence.
a. Graphic　b. Animation　c. Audio　d. Virtual reality

4. _____ is a type of user interface that allows users to interact with electronic devices with images rather than text commands.
a. Command-line interface　b. Image processing　c. Graphical user interface　d. Text user interface

5. _____ is a general term for an area of computer science that is concerned with the intersection of social behavior and computational systems. It has become an important concept for use in business..
a. Knowledge management　b. Cloud computing　c. Operating system　d. Social computing

二、問答題(85%)

1. 解釋下列專有名詞: (20%)
(1). HTML5　(2). Multi-touch screen　(3). Lossy/Lossless Compression (4). QuickTime (.MOV)
(5). Cascading Style Sheets (CSS)

2. 分別說明 Binary Search 和 Exhaustive Search (Sequential Search) 演算法，並分析其複雜度為何? (20%)

3. 設 **A** 為 111000(二進位值)，**B** 為 101001(二進位值)，**C** 為 000100(二進位值)，計算下列各運算式的結果:
(1). **A** AND **B**　(2). **A** XOR **B**　(3). **A** OR **C**　(4). NOT((**A** AND **B**) OR (**B** AND **C**))。(15%)

4. 在智慧型手機(如 Android 或 iOS 系統)上如何利用多媒體的特性提供新的應用服務? 試提出你的具體想法。(10%)

5. 費伯納數列 (Fibonacci number) 第 F(n) 項值的定義為:
F(n) = F(n-1) + F(n-2)，其中 n 為大於或等於零的整數， F(0) = 0 且 F(1) = 1。
(1). 請列出 F(0), F(1), ..., F(8)數列。(5%)
(2). 試以遞迴 (Recursion) 方式寫出求 F(n) 的程式碼 (可使用任何你所熟悉的程式語言)。(15%)