

國立成功大學

111學年度碩士班招生考試試題

編 號： 227

系 所： 會計學系

科 目： 計算機概論

日 期： 0220

節 次： 第 2 節

備 註： 不可使用計算機

※ 考生請注意：本試題不可使用計算機。請於答案卷(卡)作答，於本試題紙上作答者，不予計分。

一、選擇題 50 分(每題五分)

1. How many different symbols can be encoded using Unicode?

- A. 256 B. 4,096 C. 65,536 D. 1,046,476

2. Which of the following is not a role of a typical operating system?

- A. Control the allocation of the machine's resources
B. Control access to the machine
C. Maintain records regarding files stored in mass storage
D. Assist the computer user in the task of processing digital photographs

3. Which of the following would not require real-time processing?

- A. Typing a document with a word processor
B. Navigation of an aircraft
C. Forecasting world-wide trade for the next five year period
D. Maintaining an airline reservation system

4. Which of the following is not a protocol used in the basic TCP/IP software hierarchy?

- A. POP3 B. UDP C. TCP D. IP

5. Which of the following identifies the application to which a message arriving from the Internet should be given?

- A. Protocol B. Port number C. Domain D. Hop count

6. Which of the following is not a means of repeating a block of instructions?

- A. Pretest loop B. Posttest loop C. Recursion D. Assignment statement

7. Which of the following is a means of defining similar yet different classes in an object-oriented program?

- A. Inheritance B. Parsing C. Coercion D. Code optimization

8. Which of the following is a means of controlling the complexity of a software system?

- A. CRC cards B. Modularity C. Specifications D. Beta testing

9. If the two-dimensional array X were stored in row-major order, then in the block of main memory containing X, which of the following would be true?

- A. The entry X[1,2] would appear before X[2,1].
B. The entry X[1,2] would appear after X[2,1].
C. The entry X[1,2] would be in the same location as X[2,1].
D. None of the above

10. Suppose a binary tree contained the nodes W, X, Y, and Z. If W and X were children of Y, and Z had no children, which node would be the root?

- A. W B. X C. Y D. Z

二、非選擇題 50 分

1. (10%) If A(2,3) is in location (address) 1756 and A(3,3) is in location 1760, where is A(4,4)?

2. (10%) Given the two relations X and Y below

X:	<u>A</u>	<u>B</u>	Y:	<u>C</u>	<u>D</u>
	2	s		t	1
	5	z		r	3
				w	2

what values would be in the tuple produced by the following statements?

Temp ← JOIN X and Y where X.A = Y.D

Result ← PROJECT X.B, Y.C from Temp

3. (10%) Suppose the variable X in the following Bare Bones program has the value 3 when execution begins.

```
clear Y;  
decr X;  
while X not 0 do;  
  decr X;  
  incr Y;  
end;
```

A. What will be the value of X when the program terminates?

B. What will be the value of Y when the program terminates?

4. (10%) If we were using RSA encryption with the private keys $n = 133$ and $d = 5$, what would be the decrypted version of the encrypted message whose bit pattern is 11?

5. (10%) Based on the grammar below, draw a parse tree showing that the string "drip drip drip" is a Leak.

Leak:

