

一、選擇題 50 分(每題五分)

請勿在本試題紙上作答，否則不予計分

1. Semaphore and monitor are control mechanisms dedicated for
 - (a) multiprocessing computer system
 - (b) concurrent computer system
 - (c) distributed computer system
 - (d) network computer system

2. What is the prefix order of $(+A)*(B-C)$
 - (a) $+*A-BC$
 - (b) $*+A-BC$
 - (c) $+A*-BC$
 - (d) none

3. Which of the following describes only the portion of a database available to a particular user?
 - (a) Database model
 - (b) Schema
 - (c) Subschema
 - (d) DBMS

4. Which of the following data mining techniques would be applied when trying to identify any underlying heterogeneity within housing patterns in a community?
 - (a) Class description
 - (b) Class discrimination
 - (c) Cluster analysis
 - (d) Association analysis

5. 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

6. Copyright laws were established
 - (a) to allow authors to distribute their work while maintaining certain ownership rights.
 - (b) to allow authors to maintain ownership of their ideas.
 - (c) to restrict access to publications to certain groups within society.
 - (d) to allow ideas to be traced back to their origins.

(背面仍有題目,請繼續作答)

系所組別：會計學系乙組

考試科目：計算機概論

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7. Which of the following is an Internet application that is named after its underlying protocol?

- (a) Email (b) World Wide Web (c) FTP (d) UDP

8. Which of the following would be a concern of the file manager in a multi-user computer system that would not be a concern in a single-user system?

- (a) Maintain records regarding the location of files
(b) Maintain records regarding the ownership of files
(c) Maintain records regarding the size of files
(d) None of the above

9. Which of the following is a possible LZW compression of the message "xyz xyz xyz"?

- (a) 1234 (b) 1234545 (c) 232 (d) 12

10. Which of the following is not involved in a context switch?

- (a) Interrupt (b) Process table (c) Dispatcher (d) Shell

二、非選擇題 50 分

1. (10%) The Fibonacci polynomials are defined by the recurrence relation $F_n(x) = xF_{n-1}(x) + F_{n-2}(x)$ where $F_0(x) = 1$, $F_1(x) = x$ and $n \geq 2$.

How much space is actually needed to hold the Fibonacci polynomials F_0, F_1, \dots, F_{100} ?

2. (10%) A(1000) is a array of 4-byte real number. If the address of A(100) is 1011_{16} , what is the address of A(900)?

3. (12%) In Buddy system for storage allocation, a request for a block of size n is made, then a block of size (a) is allocated. If the total memory size is 2^m addressed from 0 to $2^m - 1$, then the possible sizes for free blocks are (b). Free blocks of the same (c) will be maintained in the same available space list.

