

國立高雄第一科技大學 101 學年度 碩士班 招生考試 試題紙

系所別：系統資訊與控制研究所

組別：資訊組

考科代碼：1151

考科：計算機概論

注意事項：

- 1、本科目得使用本校提供之電子計算器。
- 2、請於答案卷上規定之範圍作答，違者該題不予計分。

一、單選擇題：20 題，每題 3 分，共 60 分

1. _____ technology enables multitasking on a single processor.
(A) Code splitting (B) Virtual memory (C) Pipelining
(D) FIFO (E) Tim sharing
2. _____ is **NOT** suitable to represent the features of XML.
(A) User defined (B) Self-description (C) Machine readable
(D) Time dependent (E) Makeup language
3. The E-mail uses _____ protocol.
(A) FTP (B) SNMP (C) HTTP
(D) MIME (E) IMAP.
4. For object-orient language, _____ is used to describe the capability which with same method name can support various parameter types.
(A) Encapsulation (B) Protection (C) Inheritance
(D) Polymorphism (E) Abstraction.
5. In internet, which description for proxy server is **WRONG**?
(A) Accelerate web page download speed (B) Fixed communication port
(C) Catch data (D) Provide data to web user (E) Filter web access.
6. Which of the following is **NOT** the feature of virtual memory?
(A) Sharing CPU (B) Not be limited by physical memory
(C) Reduce each disk I/O times (D) Partial loading program (E) Use disk space.
7. _____ executes the Java virtual machine, such that Java is independent of platform.
(A) Compiler (B) Generator (C) Server
(D) Assembler (E) Interpreter.
8. What policy does a queue use to arrange the operation sequence?
(A) FIFO (B) LIFO (C) Random
(D) Priority (E) None of the above.

9. The database uses _____ to control data **redundancy**.
(A) Integrity (B) Independence (C) Generalization
(D) Encapsulation (E) Consistency
10. Which statement of machine cycle is **WRONG** when describing the typical computer architecture, also named Von Neumann architecture?
(A) Fetch instruction from memory (B) Execute operation
(C) Send message through internet (D) Decode instruction
(E) Write result to memory
11. Which solution is the **KEY** for improving efficiency of the Von Neumann architecture?
(A) Increase CPU speed (B) Increase memory speed (C) Increase bus speed
(D) Increase memory size (E) Increase number of CPU cores.
12. Which of the following can **NOT** be used to describe TCP/IP?
(A) Connection-oriented (B) Fixed data transmission sequence
(C) Higher QoS than TCP/UDP (D) Higher Speed than TCP/UDP
(E) Reliable communication.
13. During communication, a digital signature provides _____.
(A) Confidentiality (B) Generalization (C) Independence
(D) Authentication (E) Encapsulation
14. Which factor is **NOT** included when managing a software project?
(A) Time (B) Cost (C) Technology
(D) Quality
15. What is **WRONG** to describe hash?
(A) Without collision (B) Used to search array value (C) Well efficiency
(D) Used in MD5 (E) Extra memory to handle the hash table.
16. How many bits (at least) can be used to represent 300 different symbols?
(A) 6 (B) 7 (C) 8
(D) 9 (E) 10
17. Which one of the following file format can **NOT** be viewed in 小畫家?
(A) GIF (B) JPEG (C) BMP
(D) TIFF (E) MAV
18. Which of the following is **NOT** suitable to directly control hardware?
(A) Visual BASIC (B) C++ (C) Java
(D) C# (E) Assembly

19. What is the result after executing the recursive (4)?

```
Int recursive (int x){  
    If (x == 0) return 1  
    else return x * recursive(x-1);  
}
```

- (A) 22 (B) 24 (C) 26
(D) 28 (E) 30

20. Which of scheduling algorithm can prevent CPU from starvation?

- (A) Priority (B) Round-robin (C) Random
(D) FIFO (E) Shortest-job-first

二、簡答題：5 題，每題 4 分，共 20 分

Give and describe at least one example to show the applications of the following technologies:

1. Cloud Computing
2. Web cookie
3. RAID
4. Dynamic Linking
5. Page Rank

三、程式題：2 題，每題 10 分，共 20 分

Use C, Basic, or Java to realize the following functions. Please define the variables, input and output parameters, and function codes.

1. Function Inverse: Input a data string, e.g., "Hello", and the function Inverse can output the inversed data string, i.e., "olleH".
2. Function Classification: After input an integer value, the function Classification can output one of the level {"L", "M", "H"}. If the input value is less than 25, then output "L". If the input value is great than 32, then output "H", otherwise output "M".