可攜帶計算機＊

I. Multiple Choice – 單選題 (42points; 2 points/question)

_____ 1. What is the size for 3 minutes song sampled at 44.1KHz with the bit depth of 16?
(A) 2,116,800 Bytes (B) 702,600 Bytes (C) 88,200 Bytes (D) 264,600 Bytes

_____ 2. Convert $(18.375)_{10}$ to its binary representation. (A) 10011.01 (B) 10100.101 (C) 10010.011 (D) 10101.011

_____ 3. A(n) _____ is a collection of documents interconnected by pointers called links.
(A) FTP　(B) BBS　(C) Hypertext　(D) Telnet

_____ 4. Given int a[5] = {6, -8, 12, 2, -4}, i = 1. What is the value of a[a[i + 2]] - a[i]?
(A) 16 (B) 18 (C) 20 (D) none of the above

_____ 5. The _____ is a set of services and resources created by the system software and seen by the user.
(A) naked machine　(B) Von Neumann machine (C) Turing machine (D) virtual machine

_____ 6. The _____ unit is used to fetch, decode, and execute instructions.
(A) I/O　(B) control　(C) arithmetic/logic　(D) memory

_____ 7. The _____ operations can alter the normal sequential flow of control.
(A) branch　(B) arithmetic　(C) data transfer　(D) compare

_____ 8. Convert $(1001.101)_2$ to its decimal representation. (A) 9.625　(B) 9.75　(C) 18.75　(D) 18.625

_____ 9. The _____ holds the address of the next instruction to be executed. (A) IR (B) PC (C) MDR (D) MAR

_____ 10. Convert $(123)_{10}$ to its hexadecimal representation. (A) $(123)_{16}$　(B) $(711)_{16}$　(C) $(7A)_{16}$　(D) $(7B)_{16}$

_____ 11. A memory unit is organized as a 1,048 x 2,048 two dimensional array. What is the size of MAR?
(A) 21 bits (B) 22 bits (C) 23 bits (D) 24 bits

_____ 12. BIOS is usually stored in ___. (A) RAM　(B) cache (C) hard disk (D) ROM

_____ 13. A(n) ___ is a program that translates a C program into the corresponding object program.
(A) assembler　(B) loader　(C) compiler　(D) intepreter

_____ 14. What value does the function call fun(4) return?
```
int fun (int n) {
    if (n <= 1) return 1;
    else return fun(n - 1) * n + n - 1;
}
```
(A) 23 (B) 47 (C) 91 (D) none of the above

_____ 15. Which is a non-preemptive operating system? (A) Windows XP　(B) Windows 7　(C) DOS (D) Linux

_____ 16. Assume a = 6 and b = 3, which of the following is true?
(A) a > 3 && b > 12 (B) b * b > a + b && a/b > a % b (C) b - a > b % a (D) none of the above

_____ 17. The Web page is identified by a(n) _____. (A) HTTP (B) DNS (C) FTP (D) URL

_____ 18. In the _____ topology, all nodes connected to a single shared communication line.
(A) bus　(B) star　(C) ring　(D) line

_____ 19. The _____ of a disk is the time for the beginning of the desired sector to rotate under the read/write head.
(A) latency time (B) seek time (C) transfer time　(D)access time