

台灣聯合大學系統 94 學年度學士班轉學生考試命題紙

科目：計算機概論

類組別：B4 共 2 頁第 1 頁

*請在試卷答案卷內作答

- I. 選擇 (請在下列各小題內，選擇正確、最接近或最合適答案之選項號碼 A, B, C, D 寫入答案卷。注意！作答必須依序標明每小題之題號，選項號碼 A, B, C, D 如同試題用大寫，否則不予計分) (每小題 2%)。
- (1) SQL (Structured Query Language) 主要是在下列哪一種資料庫模式所使用？ (A) Relational (B) Frame (C) Network (D) Hierarchical.
 - (2) 十進位的小數 0.375，以二進位表示時，其值為 (A) 0.0101 (B) 0.101 (C) 0.011 (D) 以上皆非。
 - (3) 物件導向程式語言是屬於 (A) fourth-generation language (B) third-generation language (C) fifth-generation language (D) second-generation language.
 - (4) UML (Unified Modeling Language) 主要是用來做 (A) 網路規劃 (B) 物件導向分析、設計 (C) 資料庫設計 (D) 結構化設計。
 - (5) 10110011 的 2 的補數為 (A) 01001100 (B) 11001100 (C) 01001101 (D) 以上皆非。
 - (6) 電腦支援 pipelining 的作用為 (A) 增進 processing 速度 (B) 增加 memory 容量 (C) 增加 interface 連接 (D) 增進 networking 傳輸。
 - (7) 在 WWW 裏，下面哪一項不包含於 URL？ (A) Page (B) Protocol (C) Topology (D) Internet address.
 - (8) 一般而言，在軟體發展生命週期 (Systems Development Life Cycle) 裏所發生的費用，以哪個階段最高？ (A) 系統寫碼 (B) 系統分析與設計 (C) 系統測試 (D) 系統維護。
 - (9) 下面哪一項不包含於 machine cycle？ (A) Fetch (B) Store (C) Decode (D) Link.
 - (10) 處理器內所含有的高速儲存裝置稱為 (A) Cache (B) Encoder (C) Register (D) Loader.
 - (11) Whereas a standard dial-up telephone line carries only one signal, digital T-carrier lines use ____ so that multiple signals share the line. (A) multiplexing (B) file sharing (C) packet switching (D) collaborating.
 - (12) A ____ is a communications device that connects multiple computers and transmits data to its correct destination on the network. (A) multiplexer (B) router (C) server (D) network card.
 - (13) A T3 line is equal in speed to ____ T1 lines. (A) 28 (B) 256 (C) 76 (D) 8. (選擇最接近之答案)
 - (14) A ____ is a program that copies itself repeatedly, for example, in memory or on a network, using up resources and possibly shutting down the computer or network. (A) Trojan horse (B) Worm (C) Spam (D) Cybercrime.
 - (15) A translator called a ____ translates and executes programs written in a symbolic language one statement at a time. (A) compiler (B) editor (C) interpreter (D) loader.
 - (16) In structured design, system designers use a ____ to show program modules graphically. (A) use case diagram (B) flow chart (C) structure chart (D) class diagram.
 - (17) When a computer uses TCP/IP to send data over the Internet, the data is divided into _____. (A) buses (B) records (C) signals (D) packets.
 - (18) The concept of packaging data and procedures into a single object is called _____. (A) encapsulation (B) inheritance (C) dynamic binding (D) assembling.
 - (19) Which of the following is the commonly used network topology? (A) LAN (B) Bus (C) Token (D) Bridge.
 - (20) A ____ is a file that a Web server stores on a computer to collect data about the user. (A) hoax (B) spyware (C) cookie (D) cracker.

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- (21) Which answer is correct for the following statement: "Multiple computers are hooked up across the internet so the systems can tackle computing problems together." (A) Green computing (B) P2P computing (C) Centralized computing (D) Grid computing.
- (22) Which answer is correct for the following statement: "Holding all data until output is to be produced and then processing the data collectively at one time." (A) Transaction processing (B) Distributed processing (C) Batch processing (D) Interactive processing.
- (23) E-R diagram is used in (A) network planning (B) systems design (C) database design (D) project planning.
- (24) Every CPU has a clock that generates clock pulses which ____ the computer's operations. (A) synchronize (B) count (C) speed (D) decompose.
- (25) A ____ is a huge database that stores and manages the data required to analyze historical and current transactions. (A) centralized database (B) data dictionary (C) data mine (D) data warehouse.
2. Calculate the number of bytes that are needed to store the address for a 256 MB RAM. (5%)
3. Assume that the RAM access time is 10 ns, the cache access time is 2 ns and the hit rate is 60%, compute the expected memory access time. (5%)
4. Calculate the value of base x (>0) in $132_x = 90_{10}$. (5%)
5. What is the main function of an operating system? (5%)
6. What is multitasking in operating systems? (5%)
7. What is virtual memory? (5%)
8. What are the three structures of program logic in structured programming or high-level programming languages? (10%)
9. What is the von Neumann architecture? (10%)