研究所試卷

( ) 1. Objects' have the property of 　　　　-although objects may know how to communicate with one another across well-defined interfaces, they normally are not allowed to know how other objects are implemented. (A)information hiding (B)inheritance (C)polymorphism (D)overloading **(程式語言)**

( ) 2. Bob plans to build connections of Taiwan. Below is the cost between two places (undirected). (Taipei, Kaoshinug, 650), (Taipei, Taidong, 750), (Taipei, Haulian, 500), (Hualian, Taidong, 350), (Hualian, GreenIsland, 850), (Taidong, Kaoshiung, 450), (Taidong, GreenIsland, 800), (Kaoshiung, kenting, 400), (Taidong, Kenting, 300), (Taipei, Taichung, 400), (Taichung, Nanto, 300), (Nanto, Hualian, 400).Please help Bob find the way that covers all the places with the minimum cost. **(資料結構)**

( ) 3. Which of the following bit patterns represents the value -5 in two’s complement notation? (A)”00011010” (B)”11111010” (C)”00000101” (D)”11111011” **(基本計概)**

( ) 4. Which of the following technology allows a single program to behave like multiple processes being concurrently executed within the program? (A)multitasking (B)multithreading (C)time-sharing (D)multiprocessing (E)none of the above **(作業系統)**

( ) 5. Which one of the following statements is not the method to remove a deadlock: (A)Resource-Allocation Graph Algorithm can be used to detect the deadlock. (B)Require each process to request all its resources at one time. (C)Convert nonsharable resources into sharable resources. (D)Terminate all processes involved in the deadlock. (E)Terminate processes one by one until the deadlock is broken. **(作業系統)**

( ) 6. Which of the following is a vector graphics format? (A)EPS (B)PDF (C)SVG (D)all of the above **(基本計概)**

( ) 7. 下列何者是數位浮水印技術的主要應用範圍？ (A)免費郵件 (B)網域名稱查詢 (C)電子商務的安全查核 (D)記憶體管理 **(基本計概)**

( ) 8. 下列邏輯匣中，何者可以取代OR, AND及NOT gates又稱為萬用匣(Universal gate)？ (A)XOR gate (B)XNOR gate (C)AND gate (D)NAND gate **(數位邏輯)**

( ) 9. F(A,B,C)=A'B'C'+A'B'C+A'BC+A'BC'+AB'C'+ABC' **(數位邏輯)**

( ) 10. If a bit pattern represents an unsigned number, a operation divides the number by two. (A)NOT (B)XOR (C)Left-shift (D)Right-shift **(數位邏輯)**

( ) 11. To flip all the bits of a bit pattern, make a mask of all 1s and then the bit pattern and the mask. (A)AND (B)OR (C)XOR (D)all fo the above **(數位邏輯)**

( ) 12. In object-oriented programming, which of the following is designed for code reuse? (A)encapsulation (B)inheritance (C)polymorphism (D)abstraction (E)type system **(程式語言)**

( ) 13. Checking whether an edge is incident to a vertex can be done in O(n) time in an edge-list graph **(資料結構)**

( ) 14. A small program that tells the operating system how to communicate with a specific device is (A)device driver (B)spooling (C)plug-in (D)embedded driver (E)none of the above **(作業系統)**

( ) 15. Java語言中，物件導向類別class foo建構式(constructor)的合法格式是？ (A)void foo() {} (B)public foo() {} (C)int foo() {} (D)foo {} (E)foo; **(程式語言)**

( ) 16. 以下出現的“J”或“j”是指JavaScript，並非Java： (A)AJAX (B)jQuery (C)JSP (D)JCreator **(作業系統)**

( ) 17. An AVL tree is a binary search tree where for every internal node the heights of its children are the same. **(資料結構)**

( ) 18. A hash function maps a key to integers in a fixed interval, e.g., for a hash table associated with an Array of size N. **(資料結構)**

( ) 19. 何者是表示電腦CPU執行指令速度 (A)bps (B)MIPS (C)CBS (D)Gps **(基本計概)**

( ) 20. (In C) int x = 1; if (x = 2) x = 3; the value of x is 　　　　. (A)1 (B)2 (C)3 (D)compilation error (E)none of the above. **(程式語言)**

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Answer : A

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Answer : 3650

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Answer : D

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Answer : B

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Answer : B

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Answer : D

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Answer : C

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Answer : D

( ) 9. F(A,B,C)=A'B'C'+A'B'C+A'BC+A'BC'+AB'C'+ABC' **(數位邏輯)**

Answer : A'+C'

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Answer : D

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Answer : C

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Answer : B

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Answer : X

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Answer : A

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Answer : B

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Answer : A

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Answer : X

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Answer : O

( ) 19. 何者是表示電腦CPU執行指令速度 (A)bps (B)MIPS (C)CBS (D)Gps **(基本計概)**

Answer : B

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Answer : C