

科目 計算機概論 類組別 A4 701共 3 頁 第 1 頁

*請在試卷、答案卡內作答

單選題(答錯不倒扣)

- Convert the binary number $(01110.011)_2$ to decimal. What's the answer of it? (a)14.621 (b)15.754 (c) 14.375 (d) 15.492
- Convert the octal number $(00110.01)_8$ to hexadecimal. What's the answer of it? (a)48.01 (b)48.04 (c) 47.01 (d) 47.04
- Convert the hexadecimal number $(11.1)_{16}$ to octal. What's the answer of it? (a)19.21 (b)20.02 (c) 21.24 (d) 21.04
- If the ASCII code for E is 1000101, then the ASCII code for e is _____? (a)1000110 (b) 1000111 (c) 0000110 (d)1100101
- Retrieve the integer that is stored as 10100001 in sign-and-magnitude representation (a)17 (b)-17 (c)18 (d)-18
- Store -28 in an 8-bit memory location using two's complement representation. (a) 11100100 (b)11000100 (c)10100101 (d)11100101
- Show the number -0.0000000000000232 in scientific notation. (a) 23.2×10^{-14} (b) 2.32×10^{-13} (c) 2.32×10^{-14} (d) 0.232×10^{-15}
- Show the Excess_127(single precision) representation of the decimal number 5.75
(a)1 10000001 011100000000000000000000 (b)0 10000001 011100000000000000000000
(c) 0 10000011 111100000000000000000000 (d) 1 00000001 111100000000000000000000
- The bit pattern $(11001010000000000111000100001111)_2$ is stored in memory — in Excess_127 format. Show what the value of the number is in decimal notation (a)2104378.74 (b)-2104378.73 (c)2104378.75 (d)-2104378.75
- In two's complement representation with a 4-bit allocation, we get _____ when we add 1 to 7. (a)8(b)1(c)-7(d)-8
- In two's complement representation with a 4-bit allocation, we get _____ when we add 5 to 5. (a)-5(b)-6(c)-7(d)-10
- If the exponent in Excess_127 is binary 10000101, the exponent in decimal is (a)6 (b)7 (c)8 (d)9
- Two integers $A=(1\ 1010001)_2$ and $B=(1\ 0010110)_2$ are stored in sign-and-magnitude format. Show the answer of B being subtracted from A. (a)-56 (b)-57 (c)-58 (d)-59
- Two integers $A=(0\ 0010001)_2$ and $B=(1\ 0010110)_2$ are stored in sign-and-magnitude format. Show the answer of B being added to A. (a)38 (b)39 (c)40 (d)41
- Two integers $A=(0\ 0010001)_2$ and $B=(0\ 0010110)_2$ are stored in sign-and-magnitude format. Show the answer of B being added to A. (a)-6 (b)-7 (c)-5 (d)-4
- Use an arithmetic left shift operation on the bit pattern 11011001. The pattern is an integer in two's complement format. (a)78 (b)-78 (c)76 (d)-76
- Which is the answer of the bit pattern 10011000 after a circular left shift operation? (a)00110000 (b)01001100 (c)00110001 (d)01100011
- Use a mask of flip the five leftmost bits of a pattern. Test the mask with the pattern 10100110. (a)01011110 (b)10100110 (c)11011110 (d)00100110

注意:背面有試題

參考用

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19. Use the OR operator on the bit patterns 10011001 and 00101110. (a) 10011111 (b) 10101111 (c) 10001001 (d) 10111111
20. Use the XOR operator on the bit patterns 10011001 and 00101110. (a) 10110111 (b) 10101111 (c) 10001001 (d) 10111111
21. A control unit with five wires can define up to _____ operators. (a) 5 (b) 10 (c) 16 (d) 32
22. A word is _____ bits (a) 8 (b) 16 (c) 32 (d) any of above
23. If the memory address space is 16MB and the word size is 8 bits, then _____ bits are needed to access each word.
(a) 8 (b) 16 (c) 24 (d) 32
24. There are _____ bytes in 16 Terabytes. (a) 2^{16} (b) 2^{40} (c) 2^{44} (d) 2^{56}
25. _____ can be programmed and erased using electric impulses but can remain in a computer during erasure. (a) ROM
(b) PROM (c) EPROM (d) EEPROM
26. If the memory has 232 words, the address bus needs to have _____ wires. (a) 8 (b) 16 (c) 32 (d) 64
27. A control bus with eight wires can define _____ operations. (a) 8 (b) 16 (c) 256 (d) 512
28. The three steps in the running of a program on a computer are performed in the specific order _____. (a) fetch, execute, and decode (b) decode, execute, and fetch (c) fetch, decode, and execute (d) decode, fetch, and execute
29. In the _____ method for synchronizing the operation of the CPU with an I/O device, the I/O device informs the CPU when it is ready for data transfer. (a) programmed I/O (b) interrupt-driven I/O (c) DMA (d) isolated I/O
30. In the _____ method for synchronizing the operation of the CPU with an I/O device, the large block of data can be passed from an I/O device to memory directly. (a) programmed I/O (b) interrupt-driven I/O (c) DMA (d) isolated I/O
31. IP address are currently _____ bits in length (a) 4 (b) 8 (c) 32 (d) any of the above
32. The _____ protocol is one of the protocols in the transport layer. (a) TCP (b) UDP (c) SCTP (d) all of the above
33. The _____ layer of the TCP/IP protocol suite is responsible for node-to-node delivery of a frame between two adjacent nodes.
(a) transport (b) network (c) data-link (d) session
34. The _____ layer of the TCP/IP protocol suite transmits a bit stream over a physical medium. (a) physical (b) data-link
(c) network (d) transport
35. The _____ layer of the TCP/IP protocol suite provides services for end users. (a) data-link (b) transport (c) application (d) physical
36. In paging, a program is divided into equally sized sections called _____. (a) pages (b) frames (c) segments (d) partitions

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37. In ____, the program can be divided into differently sized sections. (a) partitioning (b) paging (c) demand paging (d) demand segmentation
38. In ____ sort, the items are divided into two lists: sorted and unsorted (a) selection (b) bubble (c) insertion (d) all of the above
39. In ____ sort, the items that goes into the sorted list is always the first item in the unsorted list (a) selection (b) bubble (c) insertion (d) all of the above
40. We use a ____ search for an unordered list. (a) sequential (b) binary (c) bubble (d) insertion
41. We use a ____ search for an ordered list. (a) sequential (b) binary (c) bubble (d) insertion
42. ____ is an ordered collection of data in which each element contains the location of the next element. (a) An array (b) A record (c) A linked list (d) All of the above
43. If A is the first data element input into a stack, followed by B, C, D, then ____ is the first element to be removed. (a) A (b) B (c) C (d) D
44. In ____ traversal of a binary tree, the right subtree is processed last. (a) preorder (b) inorder (c) postorder (d) a or b
45. Find the root of the binary tree with postorder traversal :FCBDG (a) F (b) C (c) B (d) G
46. In the ____ hashing method, there are no synonyms or collisions. (a) direct (b) modulo division (c) division remainder (d) digit extraction
47. The address produced by a hashing algorithm is the ____ address (a) probe (b) synonym (c) collision (d) home
48. If you need to delete an attribute in a relation, you can use the ____ operation. (a) join (b) project (c) union (d) intersection
49. In ____ encoding, a string is replaced by a pointer to the stored string. (a) Huffman (b) run-length (c) LZ (d) all of the above
50. In a digital signature involving a digest, the hash function is needed _____. (a) only by the recipient (b) only by the sender (c) by both the sender and recipient (d) none of the above

參考用