

國立中正大學

110 學年度碩士班招生考試

試題

[第3節]

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| 科目名稱 | 計算機概論 |
| 系所組別 | 資訊管理學系- 甲組 乙組 |
| | 資訊管理學系醫療資訊管理 |

—作答注意事項—

※作答前請先核對「試題」、「試卷」與「准考證」之系所組別、科目名稱是否相符。

1. 預備鈴響時即可入場，但至考試開始鈴響前，不得翻閱試題，並不得書寫、畫記、作答。
2. 考試開始鈴響時，即可開始作答；考試結束鈴響畢，應即停止作答。
3. 入場後於考試開始 40 分鐘內不得離場。
4. 全部答題均須在試卷（答案卷）作答區內完成。
5. 試卷作答限用藍色或黑色筆（含鉛筆）書寫。
6. 試題須隨試卷繳還。

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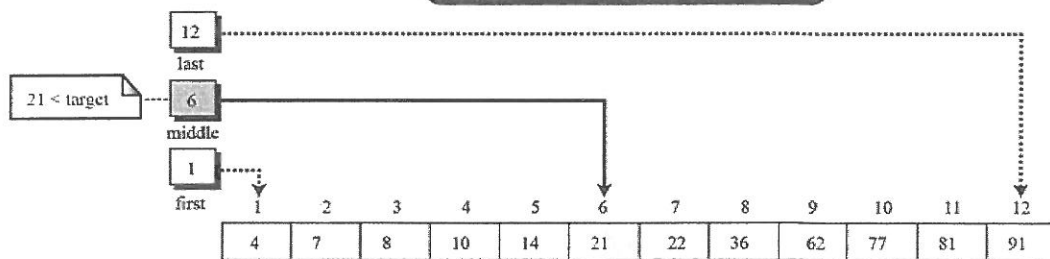
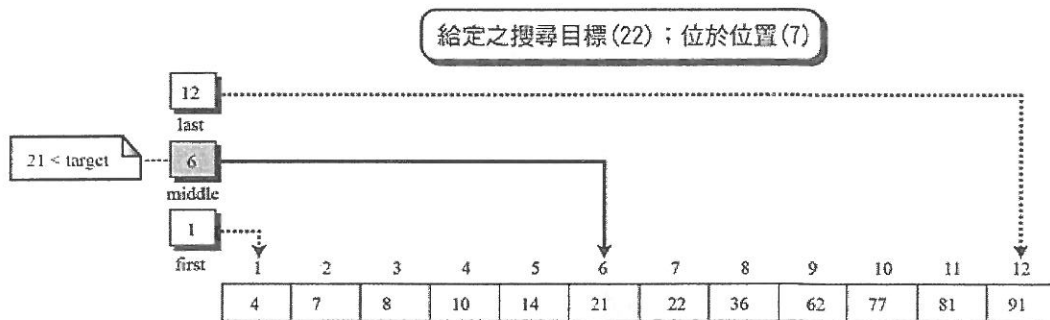
科目名稱：計算機概論

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1. Store the number -59 to 8-bit memory, use (12 points)
(A) Symbol-and-size notation (B) 2's complement notation.
2. Convert the Octal number $(23.7)_8$ into the following carry number: (10 points)
(A) Decimal number (B) Hexadecimal number.
3. Convert the Decimal number 112.625 into the following carry number: (18 points)
(A) Binary number (B) Octal number (C) Hexadecimal number.
4. How many times does it take to find the target element, when binary search is used to search the following list? (6 points)



5. In the memory, there is an array with size of 50 (row) \times 8 (column). Assume that the element $[1][1]$ is stored at memory address 1000, and the row-major storage is adopted. (12 points)
(A) If each element occupies one-byte memory, please calculate the memory address of the element $[12][6]$.
(B) If each element occupies four-byte memory, please calculate the memory address of element $[37][1]$.
6. The original list is $\{23, 78, 45, 8, 32, 56\}$, a total of six numbers: (18 points)
(A) What is the result after the third round, when selection sort is used?
(B) What is the result after the third round, when bubble sort is used?
(C) What is the result after the third round, when insertion sort is used?

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7. There is a binary tree as shown below: (24 points)

(A) What is the order in breadth-first search?

(B) In depth-first search, what is the order in preorder traversal?

(C) In depth-first search, what is the order in inorder traversal?

(D) In depth-first search, what is the order in postorder traversal?

