

Quiz Questions: Algorithms

1. The Worst case occurs in linear search algorithm when _____
 - A. Item is somewhere in the middle of the list
 - B. Item is not in the list at all
 - C. Item is the last element in the list
 - D. Item is the last element in the array or is not there at all

2. To sort a list with n elements, the insertion sort begins with the _____ element.
 - A. First
 - B. Second
 - C. Third
 - D. Last

3. Efficiently determining the position of the smallest element in a list, requires to solve a
 - A. Searching problem
 - B. Sorting problem
 - C. Optimization problem
 - D. All of the above

4. Binary search will perform fewer steps than linear search
 - A. Always true
 - B. The opposite is true
 - C. Sometimes true
 - D. True if input is ordered

5. Before the last pass of bubble sort
 - A. The first two elements can be out of order
 - B. The last two elements can be out of order
 - C. All elements are already ordered
 - D. The last element needs to be put in the right position

6. You have coins of value 1, 3 and 5. For an amount of 9 the cashier's algorithm will return
 - A. 3×3
 - B. 9×1
 - C. 1×5 and 4×1
 - D. The smallest number of coins possible

7. Let $A = \{1,2,3\}$. The following is a maximum matching

- A. $\{(1,2)\}$
- B. $\{(1,2), (2,3)\}$
- C. $\{(2,3), (1,1)\}$
- D. $\{(1,2,3)\}$

8 Finding the least number of courses needed to finish a semester, requires to solve a

- A. Searching problem
- B. Optimization problem
- C. Marriage problem
- D. Halting problem

Answers:

1. *D*
2. *B*
3. *A*
4. *C*
5. *A*
6. *D*
7. *A*
8. *B*