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NORTH AMERICAN UNIVERSITY
INSPIRATION INNOVATION GLOBAL COMPETENCE

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State	Finished
Completed on	Sunday, 17 February 2019, 8:45 PM
Time taken	13 mins 11 secs
Grade	**8.00** out of 10.00 (**80**%)

Question 1

Correct Mark 1.00 out of 1.00

What is the complexity of Binary Search?

Select one:

- a. O(log (log N))
- b. O(log N) ✓
- c. O(N)
- d. O(N*N)

Your answer is correct.

The correct answer is: O(log N)

Question 2

Correct Mark 1.00 out of 1.00

Which one is not an O(N log N) algorithm?

Select one:

- a. Merge Sort
- b. Selection Sort ✓
- c. Heap Sort
- d. Quick Sort

Your answer is correct.

The correct answer is: Selection Sort

Question 3

Partially correct Mark 1.00 out of 2.00

Which of the following algorithms are examples of decrease by a constant factor approach?

Select one or more:

- [ ] a. All of the options
- [ ] b. None of the options
- [ ] c. Interpolation Search
- [ ] d. Exponentiation by squaring
- [ ] e. Euclid's algorithm for computing GCD
- [x] f. Binary Search ✓

Your answer is partially correct.

You have correctly selected 1.

The correct answers are: Binary Search, Exponentiation by squaring

Question 4

Correct Mark 1.00 out of 1.00

What is the complexity of Interpolation Search?

Select one:

- a. O(log N)
- b. O(log (log N)) ✓
- c. O(N)
- d. O(N*N)

Your answer is correct.

The correct answer is: O(log (log N))

Question 5

Correct Mark 1.00 out of 1.00

Which one is not an $O(N^2)$ algorithm?

Select one:

- a. Insertion Sort
- b. Bubble Sort
- c. Merge Sort ✓
- d. Selection Sort

Your answer is correct.

The correct answer is: Merge Sort

Question 6

Incorrect Mark 0.00 out of 1.00

Insertion sort falls under which variations of the decrease and conquer approach?

Select one:

- a. Variable size decrease ✗
- b. None of the options
- c. Decrease by a constant
- d. Decrease by a constant factor

Your answer is incorrect.

The correct answer is: Decrease by a constant

Question 7

Correct Mark 2.00 out of 2.00

Which of the following algorithms can be designed using variable-size-decrease variation of the decrease and conquer approach to problem solving?

Select one or more:

- [x] a. Interpolation search ✓
- [x] b. Euclid's algorithm for computing GCD ✓
- [x] c. Binary Search ✗
- [ ] d. None of the options
- [x] e. Insertion Sort ✗

Your answer is correct.

The correct answers are: Euclid's algorithm for computing GCD, Interpolation search

Question 8

Correct Mark 1.00 out of 1.00

Which of the following is NOT true about the decrease and conquer approach?

Select one:

- a. Decrease by one technique is natural approach for developing algorithms for generating elementary combinatorial objects.
- b. None of the options ✓
- c. Decrease by a constant, Decrease by a constant factor, and Variable size decrease are three major variations of the approach
- d. Also known as incremental approach
- e. All of the options

Your answer is correct.

The correct answer is: None of the options

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